PMS 419

POLARIS®
The Way Out.

Sportsman® Forest 800

Owner's Manual
for Maintenance and Safety

Read this manual carefully. It contains important safety information.
This is an adult vehicle only.
Operation is prohibited for those under 16 years of age.

WELCOME

Thank you for purchasing a POLARIS vehicle, and welcome to our world-wide family of POLARIS owners. We proudly produce an exciting line of utility and recreational products.

- Snowmobiles
- All-terrain vehicles (ATVs)
- *RANGER*® utility vehicles
- Victory Motorcycles®

Always follow the instructions and recommendations in this manual. The manual contains instructions for minor maintenance, but information about major repairs is outlined in the POLARIS Service Manual and should be performed only by a factory-certified Master Service Dealer® (MSD) technician. Please see your dealer for all of your service needs during (and after) the warranty period.

For more information about POLARIS, visit us online at www.polarisindustries.com.

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The Way Out.

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The original instructions for this vehicle are in English. Other languages are provided as translations of the original instructions.

Printed in U.S.A.

2012 SPORTSMAN FOREST 800 Owner's Manual

P/N 9923428

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INTRODUCTION

The following signal words and symbols appear throughout this manual and on your vehicle. Your safety is involved when these words and symbols are used. Become familiar with their meanings before reading the manual.

⚠

The safety alert symbol indicates a potential personal injury hazard.

WARNING

A WARNING indicates a hazardous situation which, if not avoided, may result in death or serious injury.

CAUTION

A CAUTION indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

A NOTICE indicates a situation that may result in property damage.

The Prohibition Safety Sign indicates an action NOT to take in order to avoid a hazard.

The Mandatory Action Sign indicates an action that NEEDS to be taken to avoid a hazard.

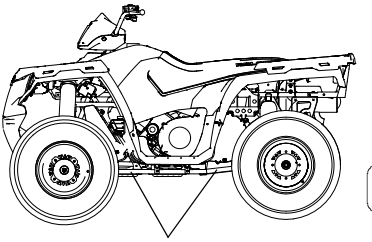
⚠ WARNING

Failure to heed the warnings and safety precautions contained in this manual can result in severe injury or death. A POLARIS ATV is not a toy and can be hazardous to operate. This vehicle handles differently than other vehicles, such as motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers like turning, or driving on hills or over obstacles, if you fail to take proper precautions.

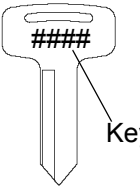
- Read this owner's manual. Understand all safety warnings, precautions and operating procedures before operating a POLARIS ATV. Keep this manual with the ATV.
- Never operate an ATV without proper instruction. Take a training course.
- This vehicle is an ADULT VEHICLE ONLY. Operation is prohibited for anyone under 16 years of age.
- Never permit a guest to operate the ATV unless the guest has read this manual and all product labels and has completed a certified safety training course.

INTRODUCTION
Vehicle Identification Numbers

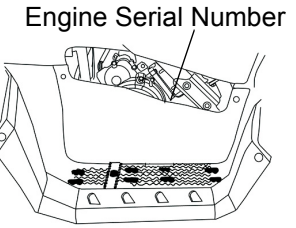
Record your vehicle's identification numbers and key number in the spaces provided. Remove the spare key and store it in a safe place. An ignition key can be duplicated only by ordering a POLARIS key blank (using your key number) and mating it with one of your existing keys. The ignition switch must be replaced if all keys are lost.



VIN
(front or rear frame)



Key Number



Vehicle Model Number: _____

Frame VIN: _____

Engine Serial Number: _____

Key Number: _____

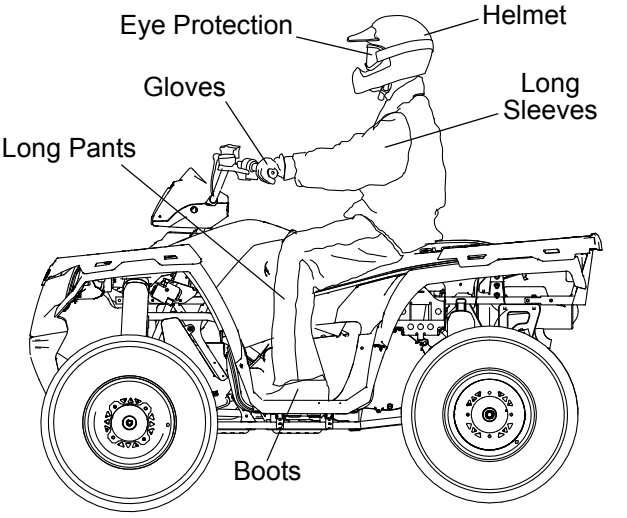
Safety Training

Never operate this vehicle without proper instruction. *Take a training course.*

For more information about safety, contact an authorized POLARIS dealer or visit the POLARIS web site at www.polarisindustries.com.

SAFETY
Safe Riding Gear

Always wear appropriate clothing when riding an ATV. Wear protective clothing for comfort and to reduce the chance of injury.

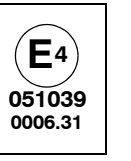


Helmet

Wearing a helmet can prevent a severe head injury. Whenever riding a POLARIS vehicle, always wear a helmet that meets or exceeds established safety standards.

Approved helmets in the USA and Canada bear a U.S. Department of Transportation (DOT) label.

Approved helmets in Europe, Asia and Oceania bear the ECE 22.05 label. The ECE mark consists of a circle surrounding the letter E, followed by the distinguishing number of the country which has granted approval. The approval number and serial number will also be displayed on the label.



Safe Riding Gear

Eye Protection

Do not depend on eyeglasses or sunglasses for eye protection. Whenever riding a POLARIS vehicle, always wear shatterproof goggles or use a shatterproof helmet face shield. POLARIS recommends wearing approved Personal Protective Equipment (PPE) bearing markings such as VESC 8, V-8, Z87.1, or CE. Make sure protective eye wear is kept clean.

Gloves

Off-road style gloves with knuckle pads are the best for comfort and protection.

Boots

The best footwear is a pair of sturdy over-the-calf boots with low heels.

Clothing

Always wear long sleeves and long pants to protect arms and legs. Riding pants with kneepads and a jersey with shoulder pads provide the best protection.

Equipment Modifications

We strongly recommend that consumers do not install on a POLARIS ATV any equipment that may increase the speed or power of the vehicle, or make any other modifications to the vehicle for these purposes.

The warranty on your POLARIS ATV is terminated if any equipment has been added to the vehicle, or if any modifications have been made to the vehicle, that increase its speed or power.

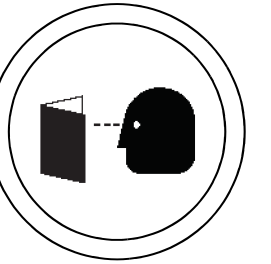
The addition of certain accessories, including (but not limited to) mowers, blades, tires, sprayers, or large racks, may change the handling characteristics of the vehicle. Use only POLARIS-approved accessories, and familiarize yourself with their function and effect on the vehicle.

SAFETY

⚠ WARNING

Failure to operate the ATV properly can result in a collision, loss of control, accident or overturn, which may result in serious injury or death. Heed all safety warnings outlined in this section of the owner's manual. See the OPERATION section of the owner's manual for proper operating procedures.

Operating Without Instruction



Operating this ATV without proper instruction increases the risk of an accident. The operator must understand how to operate the ATV properly in different situations and on different types of terrain.

Never operate this vehicle without proper instruction. *Take a training course.* Beginners should receive training from a certified instructor.

Never permit others to operate the vehicle unless they have read and understand this manual and all product labels, and have completed a certified safety training course.

Age Restrictions

This vehicle is an ADULT VEHICLE ONLY. Operation is prohibited for anyone under 16 years of age.

Even though a child may be within the recommended age group for operating some ATVs, he/she may not have the skills, abilities, or judgment needed to operate an ATV safely and could be susceptible to accident or injury.

Safety Warnings

Handling Gasoline

Gasoline is highly flammable and explosive under certain conditions.

- Always exercise extreme caution whenever handling gasoline.
- Always refuel with the engine stopped, and outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not overfill the tank. Do not fill the tank neck.
- If gasoline spills on your skin or clothing, immediately wash it off with soap and water and change clothing.

Exposure to Exhaust

Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time. Never start the engine or let it run in an enclosed area.

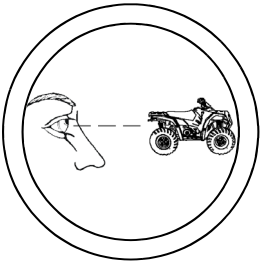
The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm. Operate this vehicle only outdoors or in well-ventilated areas.

Failure to Inspect Before Operating

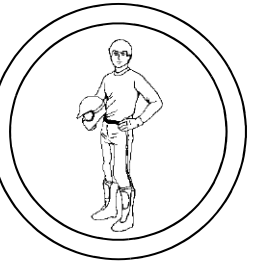
Failure to inspect and verify that the ATV is in safe operating condition before operating increases the risk of an accident.

Always inspect the ATV before each use to make sure it's in safe operating condition.

Always follow all inspection and maintenance procedures and schedules described in the owner's manual.



SAFETY
Safety Warnings
Protective Apparel



Riding in this vehicle without wearing an approved helmet and protective eyewear increases the risk of a serious injuries in the event of an accident.

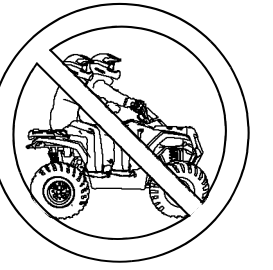
Operator and passenger must always wear an approved helmet that fits properly and eye protection (goggles or face shield).

Using Alcohol or Drugs

Operating the ATV after consuming alcohol or drugs could adversely affect operator judgment, reaction time, balance and perception.

Never consume alcohol or drugs before or while operating an ATV.

Carrying a Passenger

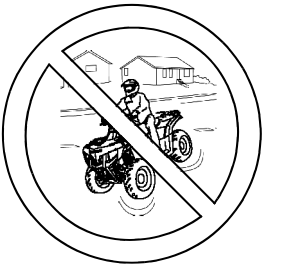


Carrying a passenger greatly reduces the operator's ability to balance and control the ATV, which may result in an accident or overturn.

Never carry a passenger on this ATV.

Safety Warnings

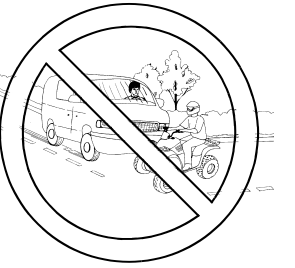
Operating on Pavement



Operating an ATV on paved surfaces (including sidewalks, paths, parking lots and driveways) may adversely affect the handling of the ATV and could result in loss of control and accident or overturn.

Avoid operating the ATV on pavement. ATV tires are designed for off-road use. If it's unavoidable, travel slowly and avoid sudden turns or stops.

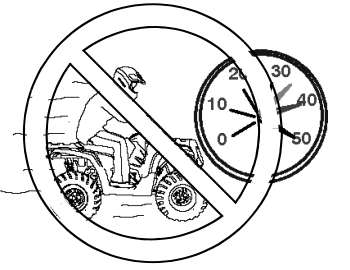
Operating on Public Roads



Operating this ATV on public streets, roads or highways could result in a collision with another vehicle.

Never operate the ATV on any public street, road or highway, including dirt and gravel roads. In many states it's unlawful to operate ATVs on public streets, roads and highways.

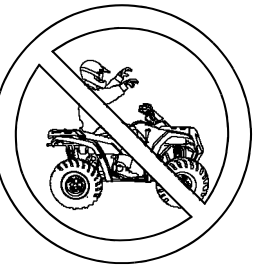
Operating at Excessive Speeds



Operating the ATV at excessive speeds increases the operator's risk of losing control.

Always operate at a speed that's appropriate for the terrain, the visibility and operating conditions, and your experience.

SAFETY
Safety Warnings
Physical Control of the ATV



Removing a hand from the handlebars or feet from the footrests during operation can reduce your ability to control the vehicle or cause loss of balance and ejection from the ATV. If the operator's foot is not firmly planted on the footrest, it could also contact the rear wheels.

Never remove your hands from the handlebars while operating, and always keep both feet on the footrests.

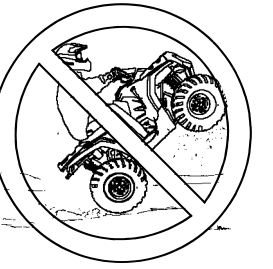
Turning Improperly

Turning improperly could cause loss of traction, loss of control, accident or overturn.

Always follow proper procedures for turning as described in the owner's manual.

Never turn abruptly or at sharp angles. Never turn at high speeds. Practice turning at slow speeds before attempting to turn at faster speeds.

Jumps and Stunts



Attempting wheelies, jumps and other stunts increases the risk of an accident or overturn.

Never attempt wheelies, jumps, or other stunts. Avoid exhibition driving.

Improper Hill Climbing

Improper hill climbing could cause loss of control or overturn. Always follow proper procedures for climbing hills as described in the owner's manual. See page 53.

Safety Warnings

Descending Hills Improperly

Improperly descending a hill could cause loss of control or overturn.

- Always follow proper procedures for traveling down hills as described in the owner's manual. **NOTE:** A special technique is required when braking while traveling downhill. See page 55.
- Always descend a hill with the transmission in forward gear. Do not descend a hill with the transmission in neutral.
- Always check the terrain carefully before descending a hill.
- Shift your weight rearward.
- Never travel down a hill at high speed.
- Avoid traveling down a hill at an angle, which would cause the vehicle to lean sharply to one side. Travel straight down the hill when possible.

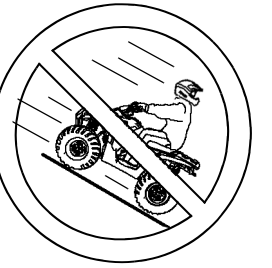
Crossing Hillsides

Driving on a sidehill is not recommended. Improper procedure could cause loss of control or overturn. Avoid crossing the side of any hill unless absolutely necessary.

If crossing a hillside is unavoidable, always follow proper procedures as described in the owner's manual. See page 54.

Never attempt to turn the ATV around on any hill until you've mastered the turning technique (on level ground) as described in the owner's manual. See page 56.

SAFETY
Safety Warnings
Stalling While Climbing a Hill



Stalling, rolling backwards or improperly dismounting while climbing a hill could cause an overturn.

- Always maintain a steady speed when climbing a hill.

If all forward speed is lost:

- Keep body weight uphill.
- Apply the brakes.
- Lock the parking brake when fully stopped.
- Dismount on uphill side, or to either side if ATV is pointed straight uphill.
- Turn the ATV around and remount, following the procedure described in the owner's manual. See page 56.

If the ATV begins rolling downhill:

- Keep body weight uphill.
- Never apply engine power.
- Never apply the rear brake while rolling backwards. Apply the single-lever brake gradually.
- When fully stopped, apply the rear brake as well, and then lock the parking brake.
- Dismount on uphill side, or to either side if ATV is pointed straight uphill.
- Turn the ATV around and remount, following the procedure described in the owner's manual. See page 56.

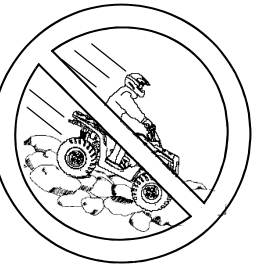
Operating on Steep Hills

Operating on excessively steep hills could cause an overturn.

Never operate on hills too steep for the ATV or for your abilities. Never operate the ATV on hills steeper than 25 degrees.

Safety Warnings

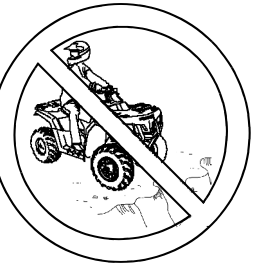
Operating on Slippery Terrain



Failure to use extra caution when operating on excessively rough, slippery or loose terrain could cause loss of traction, loss of control, accident or overturn.

Do not operate on excessively rough, slippery or loose terrain. Always use extra caution on rough, slippery or loose terrain.

Operating in Unfamiliar Terrain



Failure to use extra caution when operating on unfamiliar terrain could result in an accident or overturn.

Unfamiliar terrain may contain hidden rocks, bumps, or holes that could cause loss of control or overturn.

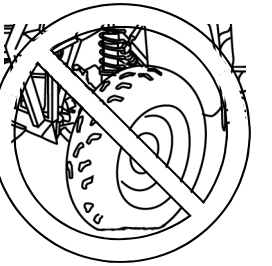
Travel slowly and use extra caution when operating on unfamiliar terrain. Always be alert to changing terrain conditions.

SAFETY
Safety Warnings
Operating Improperly in Reverse

Improperly operating in reverse could result in a collision with an obstacle or person. Always follow proper operating procedures as outlined in this manual. See page 59.

Before shifting into reverse gear, always check for obstacles or people behind the ATV. When it's safe to proceed, back slowly.

Improper Tire Maintenance



Operating this ATV with improper tires or with improper or uneven tire pressure could cause loss of control or accident.

Always use the size and type of tires specified for your ATV.

Always maintain proper tire pressure as described in the owner's manual and on safety labels.

Safety Warnings

Operating Over Obstacles

Improperly operating over obstacles could cause loss of control or overturn.

Before operating in a new area, check for obstacles. Avoid operating over large obstacles such as rocks and fallen trees. If unavoidable, use extreme caution and always follow proper operating procedures as outlined in this manual. See page 58.

Skidding or Sliding

Skidding or sliding can cause loss of control or overturn (if tires regain traction unexpectedly).

On slippery surfaces such as ice or loose gravel, travel slowly and use extra caution to reduce the chance of skidding or sliding. Do not operate on excessively slippery surfaces.

Operating Through Deep Water

Operating the ATV through deep or fast-flowing water could cause the tires to float, causing loss of control or overturn.

Avoid operating the ATV through deep or fast-flowing water. If it's unavoidable to enter water that exceeds the recommended maximum depth (see page 57):

- Travel slowly.
- Balance your weight carefully.
- Avoid sudden movements.
- Maintain a slow and steady forward motion. Do not make sudden turns or stops, and do not make sudden throttle changes.
- Wet brakes may have reduced stopping ability. After leaving water, test the brakes. Apply them lightly several times while driving slowly. The friction will help dry out the pads.

SAFETY
Safety Warnings
Improper Cargo Loading

Overloading the ATV or carrying/towing cargo improperly may cause changes in handling, which could cause loss of control or an accident.

- Never exceed the stated load capacity for this ATV.
- Cargo should be properly distributed and securely attached.
- Reduce speed when carrying cargo or pulling a trailer. Allow a greater distance for braking.
- NEVER exceed 50 MPH (80 km/h) when rear cargo loads are above 75 lbs. (34 kg) and/or front cargo loads are above 37 lbs. (17 kg).
- Always follow the instructions in the owner's manual for carrying cargo or pulling a trailer.

Operating on Frozen Bodies of Water

Operating on frozen bodies of water may result in serious injury or death if the ATV and/or the operator fall through the ice.

Never operate the ATV on a frozen body of water unless you have independently verified that the ice is sufficiently thick to support the weight and moving force of the ATV, you and your cargo, together with any other vehicles in your party. Variances in snow depth and/or water currents may result in uneven ice thickness. Always check with local authorities and residents to confirm ice conditions and thickness over your entire route. ATV operators assume all risk associated with ice conditions on frozen bodies of water.

Poor Visibility

Operating the ATV in darkness or inclement weather could result in a collision or accident, especially if operating on a road or street. This ATV is not equipped with highway-approved lights. Operate this vehicle off-road only. Use caution and drive at reduced speeds in conditions of reduced visibility such as fog, rain and darkness. Clean headlights frequently and replace burned out headlamps promptly.

Safety Warnings

Operating a Damaged ATV

Operating a damaged ATV can result in an accident. After any overturn or accident, have a qualified service dealer inspect the entire machine for possible damage, including (but not limited to) brakes, throttle and steering systems.

Physical Skills

Safe operation of this rider-active vehicle requires good judgement and physical skills. Persons with cognitive or physical disabilities who operate this vehicle have an increased risk of overturn and loss of control.

Hot Exhaust Systems

Exhaust system components are very hot during and after use of the vehicle. Hot components can cause burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system. Use caution when traveling through tall grass, especially dry grass.

Unauthorized Use of the ATV

Leaving the keys in the ignition can lead to unauthorized use of the vehicle, which could result in an accident or overturn. Always remove the ignition key when the vehicle is not in use.

SAFETY
Safety Labels and Locations

Warning labels have been placed on the vehicle for your protection. Read and follow the instructions on each label carefully. If any of the labels shown in this manual differ from the labels on your vehicle, always read and follow the instructions of the labels on the vehicle.

If an informational or graphic label becomes illegible or comes off, contact your POLARIS dealer to purchase a replacement. Replacement *safety* labels are provided by POLARIS at no charge. The part number is printed on the label.

General Warning

WARNING

Improper ATV use can result in SEVERE INJURY or DEATH

ALWAYS USE AN APPROVED HELMET AND PROTECTIVE GEAR

NEVER USE ON PUBLIC ROADS

NEVER CARRY PASSENGERS

NEVER USE WITH DRUGS OR ALCOHOL

NEVER operate:

- without proper training or instruction
- at speeds too fast for your skills or the conditions
- on public roads - a collision can occur with another vehicle
- with a passenger - passengers affect balance and steering and increase risk of losing control

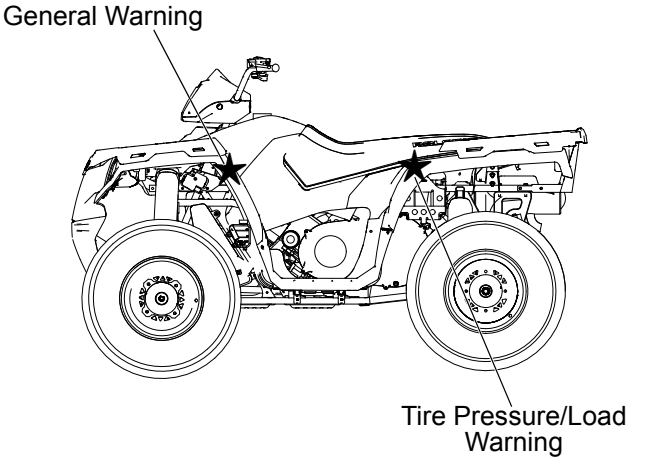
ALWAYS:

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns
- avoid paved surfaces - pavement may seriously affect handling and control

LOCATE AND READ OWNER'S MANUAL.

FOLLOW ALL INSTRUCTIONS AND WARNINGS.

Safety Labels and Locations



Tire Pressure/Load Warning

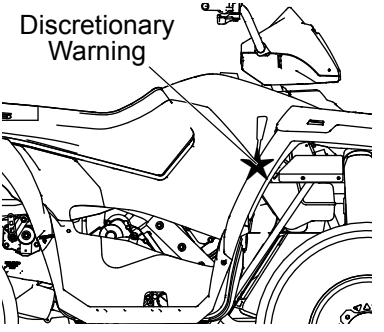
WARNING
Improper tire pressure or overloading can cause loss of control.
Loss of control can result in severe injury or death.

- Cold tire pressure:
  Front: 5.0 psi (34.5 kPa)
  Rear: 5.0 psi (34.5 kPa)
- Maximum weight capacity: 515 lbs. (234 kg)

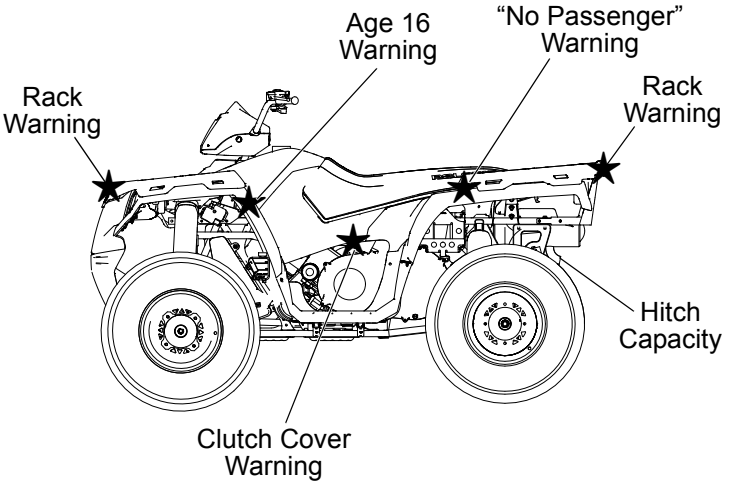
Discretionary Warning

WARNING

- Never operate this ATV on HILLS steeper than 25 degrees ∠ 25°. To prevent overturn on hilly terrain, use throttle and brakes gradually, and shift weight uphill.
- REVERSE operation can be dangerous even at low speeds. Steering becomes difficult. To prevent loss of control, avoid sudden braking or sharp turns.



SAFETY
Safety Labels and Locations



"No Passenger" Warning

WARNING

NEVER ride as a passenger.

Passengers can cause a loss of control, resulting in SEVERE INJURY or DEATH.

Age 16 Warning

WARNING

Operating this ATV if you are under the age of 16 increases your chance of severe injury or death.

NEVER operate this ATV if you are under age 16.

Safety Labels and Locations

Clutch Cover Warning

WARNING

- Moving parts hazard under belt-clutch guard. To prevent serious injury, do not operate vehicle with guard removed.
- Do not modify engine or clutch. Doing so can cause part failure, possible imbalance, and excessive engine RPM, which can result in serious injury or death.

NO STEP

Rack Warning, Front and Rear

WARNING

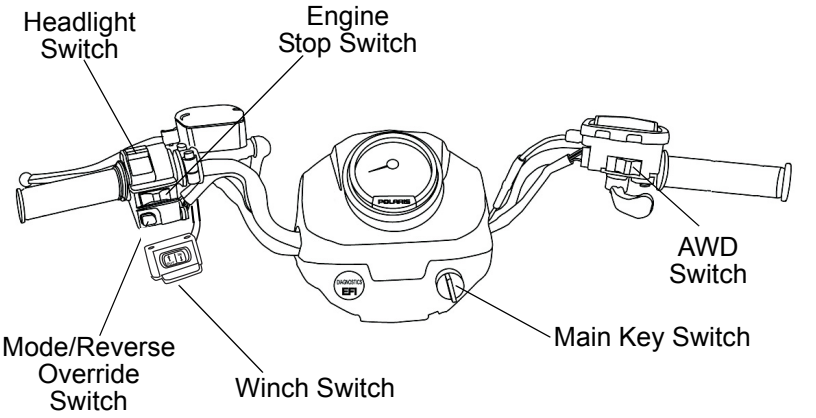
- DO NOT TOW FROM RACK OR BUMPER. Vehicle damage or tipover may result causing severe injury or death. Tow only from tow hooks or hitch.
- Max Rack Loads: Front 100 lbs. (45 kg) Rear 200 lbs. (91 kg)

Reverse Override Warning/4X4 Caution

WARNING

Improper use of the override button can lead to loss of control resulting in severe injury or death. Do not activate override while throttle is engaged. Always apply throttle gradually, while in reverse.

FEATURES AND CONTROLS
Switches



Mode/Reverse Override Switch

This vehicle is equipped with a reverse speed limiter system.To gain additional wheel speed while backing, release the throttle and depress the override button.

WARNING! Pressing the override button while the throttle is open can cause loss of control, which may result in serious injury or death. Always release the throttle before pressing the override button.

The override switch also allows activation of AWD in reverse, if the AWD switch is on. This switch is also used to toggle through the modes of the rider information center. See page 35.

AWD Switch

Use the AWD switch to engage 4X4 or 2X4. See page 34.

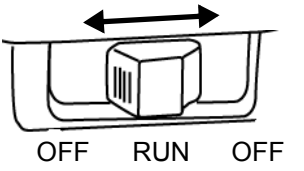
Winch Switch

See page 63 for winch information.

Switches

Engine Stop Switch

Move the stop switch either left or right to the OFF position to stop the engine quickly. The engine will not start or run when the switch is off.



Both the main switch and the engine stop switch will shut off all electrical power to the vehicle, including lights.

Main Key Switch

Use the main key switch to start the engine. See page 49 for starting procedures.

Headlight Switch

Use the headlight switch to turn the lights on and off and to change the lights from high beam to low beam. The key must be in the ON position and the engine stop switch must be in the RUN position to operate the headlights.

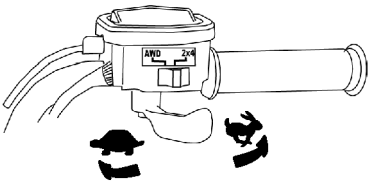
FEATURES AND CONTROLS
Throttle Lever

⚠ WARNING

Operating an ATV with sticking or improperly operating throttle controls could cause an accident. Never start or operate an ATV that has a sticking or improperly operating throttle. Always contact your dealer for service before operating the vehicle.

Failure to check or maintain proper operation of the throttle system can result in an accident if the throttle lever sticks during operation. Always check the lever for free movement and return before starting the engine. Also check occasionally during operation.

Modifications to the electronic throttle control could result in failure to perform as designed, which could result in an accident. Do not attempt to modify the throttle control system or replace it with any after market throttle mechanisms. Always ensure that the throttle cable is installed and properly routed to the throttle control.



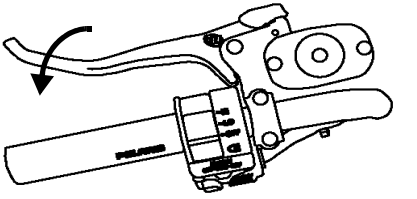
Engine speed and vehicle movement are controlled by pressing the throttle lever. The throttle lever is spring loaded. Engine speed returns to idle when the lever is released.

This ATV is equipped with POLARIS Electronic Throttle Control (ETC), which is designed to reduce the risk of a frozen or stuck throttle. If the throttle cable should stick in an open position when the operator releases the throttle lever, the engine will stop, and power to the rear wheels will cease.

Brake Lever

⚠ WARNING

Operating the ATV with a spongy brake lever can result in loss of braking, which could cause an accident. Never operate the ATV with a spongy-feeling brake lever. Always contact your dealer for service before operating the vehicle.



Squeeze the brake lever toward the handlebar to apply the front and rear brakes. These brakes are hydraulically activated disc type brakes that are activated by only one lever.

Always test brake lever travel and master cylinder fluid level before riding. When squeezed, the lever should feel firm. Any sponginess would indicate a possible fluid leak or low master cylinder fluid level, which must be corrected before riding. Contact your dealer for proper diagnosis and repairs.

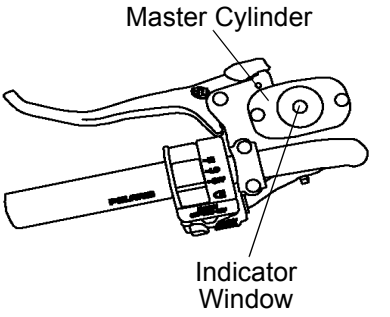
FEATURES AND CONTROLS
Master Cylinder/Brake Fluid

⚠ WARNING

An over-full master cylinder may cause brake drag or brake lock-up, which could result in an accident. Maintain brake fluid at the recommended level. Do not overfill.

Never store or use a partial bottle of brake fluid. Brake fluid is hygroscopic, meaning it rapidly absorbs moisture from the air. The moisture causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of brake failure, which could result in an accident. After opening a bottle of brake fluid, always discard any unused portion.

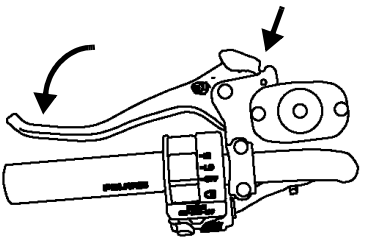
Check the brake fluid in the master cylinder before each ride.



1. Position the ATV on a level surface.
2. Position the handlebars so the master cylinder is level.
3. View the brake fluid level through the indicator window on the top of the master cylinder. The eye will appear dark when the fluid level is full. When fluid is low, the eye will be clear.
4. If the fluid level is low add DOT 4 brake fluid only. Do not overfill.

Parking Brake

Locking the Parking Brake



1. Place the transmission in PARK.
2. Squeeze and release the brake lever two or three times, then squeeze and hold.
3. Push the parking brake lock forward to engage the lock.
4. Release the brake lever.
5. To release the parking brake lock, squeeze and release the brake lever. It will return to its unlocked position.

WARNING! Operating the ATV while the parking brake is engaged could result in an accident or fire. Always check to be sure the parking brake is disengaged before operating.

The parking brake may relax if left on for a long period of time. Always block the wheels to prevent rolling. Always block the wheels on the downhill side of the ATV if leaving it parked on a hill. Another option is to park the ATV in a sidehill position. Never depend on the parking brake alone if the ATV is parked on a hill. Always block the wheels to prevent rolling.

FEATURES AND CONTROLS
Auxiliary Foot Brake

⚠ WARNING

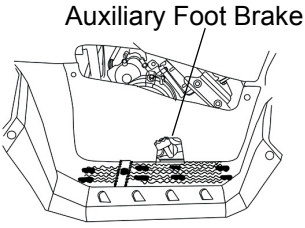
Never back down a hill. Applying the auxiliary brake when backing down a hill may cause rear tipover, which could result in serious injury or death.

Use caution when applying the auxiliary brake. Do not aggressively apply the auxiliary brake when going forward. The rear wheels may skid and slide sideways, causing loss of control, which may result in serious injury or death.

The auxiliary brake system is intended to be used as a backup for the main brake system. Should the main system fail, use the auxiliary foot brake.

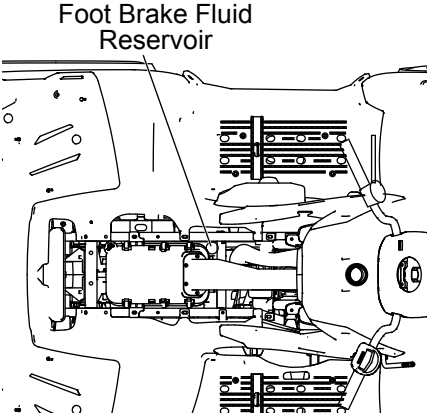
The auxiliary foot brake is located on the inside of the right footrest. Operate this brake with your right foot.

If the rear wheels slide while using the auxiliary brake, *reduce* brake pedal pressure to brake the rear wheels without skidding.



Brake Fluid Level

Check the brake fluid level frequently for the auxiliary brake system. The reservoir is located under the seat on the left side of the vehicle. Maintain the fluid level between the maximum and minimum marks.

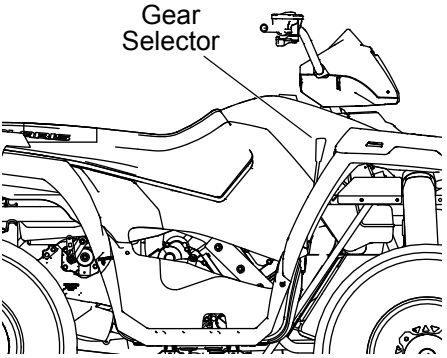


Automatic Transmission Gear Selector

The transmission gear selector is located on the right side of the vehicle.

H: High Gear
L: Low Gear
N: Neutral
R: Reverse
P: Park

To shift gears, brake to a complete stop. When the engine is idling, move the lever to the desired gear.



NOTICE: Shifting gears with the engine speed above idle or while the vehicle is moving could cause transmission damage.

Whenever the ATV is left unattended, always place the transmission in PARK and lock the parking brake.

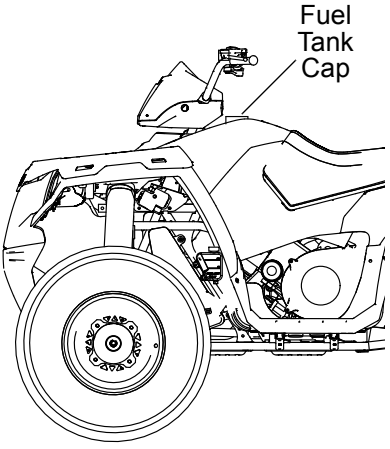
Belt Life

To extend belt life, use low forward gear when pulling a heavy load at less than seven miles per hour for extended periods and when operating uphill at a slow speed.

Fuel Tank Cap

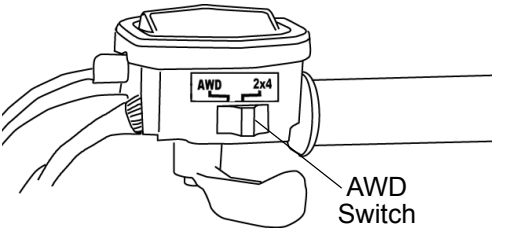
Always refuel with the engine stopped, and outdoors or in a well ventilated area. Refuel on a level surface.

Remove the fuel tank cap to add fuel to the fuel tank. Use either leaded or unleaded gasoline with a minimum pump octane number of 87=(R+ M/2) octane. *Do not use fuel with ethanol content greater than 10 percent, such as E-85 fuel.*



FEATURES AND CONTROLS
All Wheel Drive (AWD) System

The All Wheel Drive system is controlled by the AWD switch. When the switch is on 2X4, the ATV is in two-wheel drive at all times. When the switch is on AWD, the ATV is in all wheel drive and the AWD indicator light in the instrument cluster will be on.



When in AWD, the demand drive unit will automatically engage any time the rear wheels lose traction. When the rear wheels regain traction, the demand drive unit will automatically disengage.

There is no limit to the length of time the vehicle may remain in AWD.

Tip: The override switch allows activation of AWD in reverse if the AWD switch is on. See page 26.

Engaging AWD

The AWD switch may be turned on or off while the vehicle is moving. Initially, the vehicle's electronic system will not enable AWD until the engine RPM is below 3100. Once enabled, AWD remains enabled until the AWD switch is turned off. If the switch is turned off while the demand drive unit is moving, it will not disengage until the rear wheels regain traction.

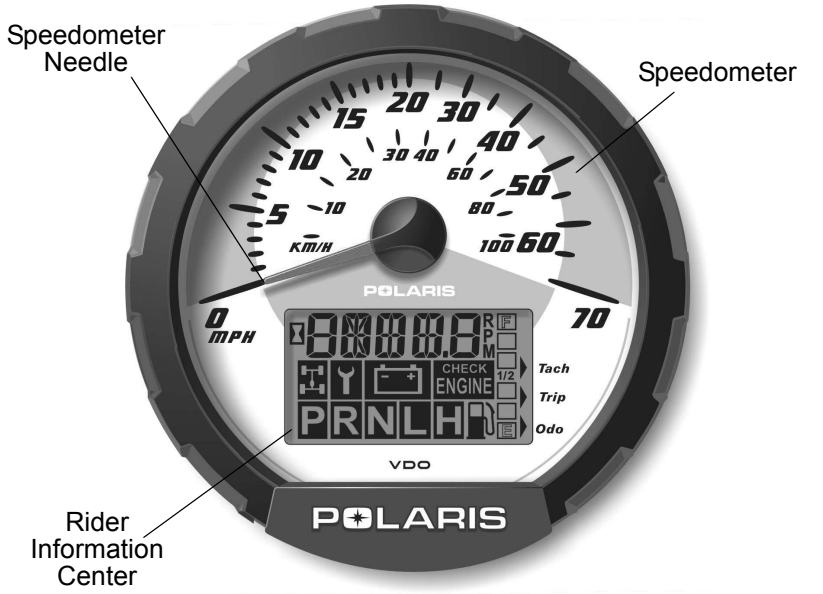
Engage the AWD switch before getting into conditions where front wheel drive may be needed. If the rear wheels are spinning, release the throttle before switching to AWD.

NOTICE: Switching to AWD while the rear wheels are spinning may cause severe drive shaft and gearcase damage. Always switch to AWD while the rear wheels have traction or are at rest.

Instrument Cluster

Your ATV is equipped with an instrument cluster that senses vehicle speed from the right front wheel. In addition to showing vehicle speed, the speedometer needle flashes when a warning condition exists.

The instrument cluster measures distance in miles as well as hours of operation. It also includes a reverse speed limiter function that limits the ATV's speed to approximately 7-9 mph (11-14 km/h). Refer to page 26 for additional information.

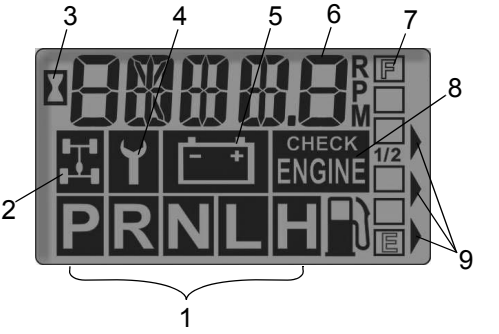


NOTICE: High water pressure may damage ATV components. Wash the ATV by hand or with a garden hose using mild soap.

Certain products, including insect repellents and chemicals, will damage the speedometer lens and other plastic surfaces. Do not use alcohol to clean the instrument cluster. Do not allow insect sprays to contact the lens. Immediately clean off any gasoline that splashes on the instrument cluster.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center

The rider information center is located in the instrument cluster. All segments will light up for 2.5 seconds at start-up. If the instrument cluster fails to illuminate, a battery over-voltage may have occurred and the instrument cluster may have shut off to protect the electronic speedometer. If this occurs, take the ATV to your POLARIS dealer for proper diagnosis.



1. **Gear Indicator** - This indicator displays gear shifter position.
   H = High Gear
   L = Low Gear
   N = Neutral
   R = Reverse Gear
   P = Park
2. **AWD Indicator** - This indicator illuminates when the AWD switch is on AWD.
3. **Engine Hour Display Indicator**
4. **Service Interval/Diagnostic Mode Indicator**
5. **Low Battery and Over Voltage** - This warning usually indicates that the ATV is operating at an RPM too low to keep the battery charged. It may also occur when the engine is at idle and high electrical load (lights, cooling fan, accessories) is applied. Drive at a higher RPM or recharge the battery to clear the warning.
6. **Odometer/Tachometer/Tripmeter/ Hour Meter**
7. **Fuel Gauge** - The segments of the fuel gauge show the level of fuel in the fuel tank. When the last segment clears, a low fuel warning is activated. All segments will flash, FUEL will display in the LCD, and the speedometer needle will blink. Refuel immediately.
8. **Check Engine Warning Indicator** - This indicator serves two purposes. The word HOT displays if the engine overheats. It also appears if an EFI-related fault occurs. Do not operate the ATV if this warning appears. Serious engine damage could result.
9. **Mode Indicator**

Instrument Cluster

Rider Information Center

Standard Modes

Use the MODE button to toggle through the mode options. The reverse override button is also the MODE button. See page 26. The transmission cannot be in reverse when using this feature.

Odometer Mode

The odometer records the miles traveled by the ATV.

Trip Meter Mode

The trip meter records the miles traveled by the ATV on each trip if it's reset before each trip. To reset the trip meter, select the trip meter mode. Press and hold the mode button (override button) until the total changes to 0. In the Rider Information Center, the trip meter display contains a decimal point, but the odometer displays without a decimal point.

Hour Meter Mode

This mode logs the total hours the engine has been in operation.

Tachometer Mode

The engine RPM is displayed digitally. Small fluctuations in the RPM from day to day may be normal because of changes in humidity, temperature and elevation.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center
Diagnostic Mode

The wrench icon will display when the gauge is in the diagnostic mode. To exit the diagnostic mode, turn the key switch off and on. Any movement of the tires will also cause the gauge to exit the diagnostic mode.

To enter the diagnostics mode:

1. Turn the key switch off and wait 10 seconds.
2. Lock the parking brake.
3. Place the transmission in neutral.
4. Hold the mode/reverse override button and turn the key switch on. Release the switch as soon as the display is activated.
5. Use the mode button to toggle through the diagnostic screens.

Instrument Cluster

Rider Information Center

Diagnostic Mode

Battery Voltage Screen

View this screen to check battery voltage level.

Tachometer Screen

View the tachometer to check engine speed.

AWD Diagnostic Screen

The gauge indicates whether or not current is flowing through the all-wheel-drive coil. This screen is for informational purposes only. Please see your dealer for all major repairs.

Gear Circuit Diagnostic Screen

This screen displays the resistance value (in ohms) being read at the gear switch input of the gauge. This screen is for informational purposes only. Please see your dealer for all major repairs.

Programmable service interval

When the hours of engine operation equal the programmed service interval setting, the wrench icon will flash for 5 seconds each time the engine is started. When this feature is enabled, it provides a convenient reminder to perform routine maintenance. See page 40.

The service interval is programmed at 50 hours at the factory.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center
Diagnostic Mode
Programmable service interval

To enable or disable the service interval:

1. Enter the diagnostic mode.
2. Toggle to the service interval screen.
3. Press and hold the mode button for about 7 seconds, until either ON or OFF appears in the Rider Information Center, depending on your preference.

To reset the service interval:

1. Enter the diagnostic mode.
2. Toggle to the service interval screen.
3. Press and hold the mode button for 2-3 seconds, until the wrench icon flashes. Release the button.
4. Press and release the mode button once to advance the setting by one hour. Press and *hold* the mode button to advance the hours quickly.
5. If you scroll past the intended number, press and hold the button until the hours cycle back to zero.
6. When the desired setting is displayed, wait until the wrench icon stops flashing. The new service interval is now programmed.

Miles/Kilometers toggle

The display in the tripmeter and odometer can be changed to display either standard or metric units of measurement.

1. Enter the diagnostic mode.
2. Toggle to the screen that displays either kilometers (KM) or miles (MP).
3. Press and hold the mode button until the letters flash, then press and release the button once. When the display stops flashing, the mode has been set.

Instrument Cluster

Rider Information Center

Downloading Codes

The EFI diagnostic mode is for informational purposes only. Please see your POLARIS dealer for all major repairs.

See page 43 for Blink Codes and Failure Descriptions. Use the following procedure to download blink codes (failure codes) from the EFI module.

1. Place the transmission in PARK.
2. Stop the engine.
3. Turn the key switch to the ON position.
4. Turn the key switch off and on three times in less than five seconds, then leave the switch on. Any blink code numbers stored in the EFI module will display, one at a time, on the screen. The number “61” and the word “END” displays after all codes have been transmitted.

FEATURES AND CONTROLS
Instrument Cluster
Rider Information Center
Downloading Codes

Code Definitions

Open Load: There is a break in the wires that lead to the item listed in the chart (injector, fuel pump, etc.), or the item has failed.

Short-to-Ground: The wire is shorted to ground between the electronic control unit and the item listed in the chart.

Shorted Load: The wires leading to the item listed in the chart are shorted together, or the item has shorted internally.

Short-to-Battery: The wire leading from the item listed in the chart to the electronic control unit is shorted to a wire at battery voltage.

Instrument Cluster

Rider Information Center

Downloading Codes

Blink Code	Failure Description
12	BEGIN SEQUENCE
22	Throttle Position Sensor Low
22	Throttle Position Sensor High
22	Throttle Position Sensor Out of Adjustment
25	Gear Sensor Signal
31	System Voltage Low
31	System Voltage High
36	Ignition Coil A Prim/Sec Circuit Malfunction: Open Load/Short-to-Ground
36	Ignition Coil A Prim/Sec Circuit Malfunction: Shorted Load/Short-to-Battery
37	Ignition Coil B Prim/Sec Circuit Malfunction: Open Load/Short-to-Ground
37	Ignition Coil B Prim/Sec Circuit Malfunction: Shorted Load/Short-to-Battery
41	Air Temp Sensor Low Voltage
41	Air Temp Sensor High Voltage
42	Engine Coolant Temp Low Voltage
42	Engine Coolant Temp High Voltage
44	Crank Position Sensor Circuit Fault
45	Barometric Pressure/Manifold Air Pressure Sensor Low
46	Barometric Pressure/Manifold Air Pressure Sensor High
47	IAC Stepper Motor: Open Load
47	IAC Stepper Motor: Short-to-Ground
51	Injector Circuit Malfunction - Cyl 1: Open Load/Short-to-Ground
51	Injector Circuit Malfunction - Cyl 1: Shorted Load/Short-to-Battery
52	Injector Circuit Malfunction - Cyl 2: Open Load/Short-to-Ground
52	Injector Circuit Malfunction - Cyl 2: Shorted Load/Short-to-Battery
55	MIL Circuit: Open Load/Short-to-Ground
55	MIL Circuit: Shorted Load/Short-to-Battery
56	Fuel Pump: Open Load/Short-to-Ground
56	Fuel Pump: Shorted Load/Short-to-Battery
58	Fan Circuit: Open Load/Short-to-Ground
58	Fan Circuit: Shorted Load/Short-to-Battery
63	Starter Enable: Open Load/Short-to-Ground
63	Starter Enable: Shorted Load/Short-to-Battery
72	Gear Sensor Signal
73	4X4: Open Load/Short-to-Ground
73	4X4: Shorted Load/Short-to-Battery
74	Rear Differential Enable: Open Load/Short-to-Ground (if equipped)
74	Rear Differential Enable: Shorted Load/Short-to-Battery (if equipped)
61	END SEQUENCE

OPERATION

⚠ WARNING

Failure to operate the ATV properly can result in a collision, loss of control, accident or overturn, which may result in serious injury or death. Read and understand all safety warnings outlined in the safety section of this owner's manual.

Break-In Period

The break-in period for your new POLARIS ATV is the first ten hours of operation, or the time it takes to use the first two full tanks of gasoline. No single action on your part is as important as following the procedures for a proper break-in. Careful treatment of a new engine and drive components will result in more efficient performance and longer life for these components.

NOTICE: Excessive heat build-up during the first three hours of operation will damage close-fitted engine parts and drive components. Do not operate at full throttle or high speeds during the first three hours of use.

Break-In Period

Engine and Drivetrain Break-in

1. Fill the fuel tank with gasoline. See page 33. Always exercise extreme caution whenever handling gasoline.
2. Check the engine oil level on the dipstick. See page 76. Add oil if necessary to maintain the level between the safe and add marks.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with vehicle operation and handling.
4. Vary the throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 46.
6. Pull only light loads.
7. Change both the oil and the filter at 20 hours or one month, whichever comes first.

PVT Break-in (Clutches/Belt)

A proper break-in of the clutches and drive belt will ensure a longer life and better performance. Break in the clutches and belt by operating at slower speeds during the break-in period as recommended. Pull only light loads. Avoid aggressive acceleration and high speed operation during the break-in period.

If a belt fails, always clean away all debris when replacing the belt.

OPERATION
Pre-Ride Checklist

Failure to inspect and verify that the ATV is in safe operating condition before operating increases the risk of an accident. Always inspect the ATV before each use to make sure it's in safe operating condition.

Item	Remarks	Page
Brake system/lever travel	Ensure proper operation	29 84
Brake fluid	Ensure proper level	30
Auxiliary brake	Ensure proper operation	32
Front suspension	Inspect, lubricate if necessary	75
Rear suspension	Inspect, lubricate if necessary	75
Steering	Ensure free operation	-
Tires	Inspect condition and pressure	89
Wheels/fasteners	Inspect, ensure fastener tightness	89 90
Frame nuts, bolts, fasteners	Inspect, ensure tightness	-
Fuel and oil	Ensure proper levels	33 76
Coolant level (if applicable)	Ensure proper level	82 83
Coolant hoses (if applicable)	Inspect for leaks	-
Throttle	Ensure proper operation	28 87
Indicator lights/switches	Ensure operation	26
Engine stop switch	Ensure proper operation	27
Air filter, pre-filter	Inspect, clean	91
Air box sediment tube	Drain deposits whenever visible	-
Headlamp	Check operation, apply POLARIS dielectric grease when lamp is replaced	27 93
Brake light/tail lamp	Check operation, apply POLARIS dielectric grease when lamp is replaced	97
Riding gear	Wear approved helmet, goggles, and protective clothing	8
Winch	Inspect cable and switch.	64-65

Safe Operation Practices

1. Complete the recommended safety training before operating this vehicle. See page 7.
2. Do not allow anyone under 16 years of age to operate this vehicle. Do not allow anyone with cognitive or physical disabilities to operate this vehicle.
3. Never carry a passenger on this ATV.
4. Engine exhaust fumes are poisonous. Never start the engine or let it run in an enclosed area.
5. Before operating, learn how to use the auxiliary brake for emergency situations (if service brakes become inoperable).
6. Operate this vehicle off-road only. Never operate the vehicle on pavement or on any public street, road or highway, including dirt and gravel roads.
7. Use caution and drive at reduced speeds in conditions of reduced visibility such as fog, rain and darkness. Clean headlights frequently and replace burned out headlamps promptly.
8. Drive in a manner appropriate for your skills and operating conditions. Never operate at excessive speeds. Never attempt wheelies, jumps, or other stunts. Never remove your hands from the handlebars while operating, and always keep both feet on the footrests.
9. Never consume alcohol or drugs before or while operating an ATV.
10. Always use the size and type of tires specified for your vehicle. Always maintain proper tire pressure.
11. Never operate a damaged ATV. After any overturn or accident, have a qualified service dealer inspect the entire machine for possible damage.
12. Never operate the ATV on a frozen body of water unless you have independently verified that the ice is sufficiently thick to support the weight and moving force of the ATV, you and your cargo, together with any other vehicles in your party.
13. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system.
14. Always remove the ignition key when the vehicle is not in use to prevent unauthorized use.

OPERATION

Know Your Riding Area/Tread Lightly

Familiarize yourself with all laws and regulations concerning the operation of this off-road vehicle in your area. Respect the environment in which you ride. Find out where the designated riding areas are by contacting your POLARIS dealer, a local riding club or local officials.

Help keep our trails open for recreational vehicle use. As an off-road enthusiast, you represent the sport and can set a good example (or a poor example) for others to follow. Tread lightly. Operate with respect for the terrain, avoid littering, and always stay on the designated trails.

Trail Etiquette

Always practice good etiquette when riding. Allow a safe distance between your vehicle and other vehicles operating in the same area. Communicate to oncoming operators by signaling the number of vehicles in your group. When stopping, move your vehicle to the edge of the trail as far as possible to allow others to pass safely.

Starting the Engine

1. Position the vehicle on a level surface outdoors or in a well-ventilated area.
2. Place the transmission in PARK.
3. Lock the parking brake.

Tip: The starter interlock will prevent the engine from starting if the transmission is in gear and the brake is not engaged.

4. Sit on the vehicle and move the engine stop switch to RUN.
5. Do not press the throttle while starting the engine.
6. Turn the ignition key past the ON position to engage the starter. Activate the starter for a maximum of five seconds, releasing the key when the engine starts.
7. If the engine does not start, return the key to the OFF position and wait five seconds before attempting to start again. Activate the starter for another five seconds if necessary. Repeat this procedure until the engine starts.

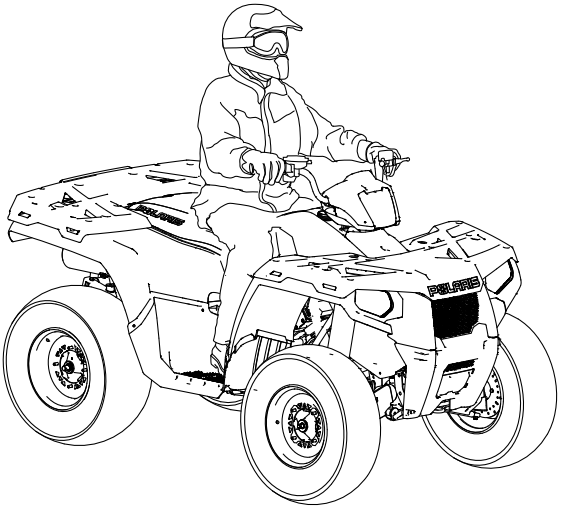
NOTICE: Operating the vehicle immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating the vehicle.

Cold Weather Operation

If the ATV is used year-round, check the oil level frequently. A rising oil level could indicate the accumulation of contaminates such as water or excess fuel in the bottom of the crankcase. Water in the bottom of the crankcase can lead to engine damage and must be drained. Water accumulation increases as outside temperature decreases.

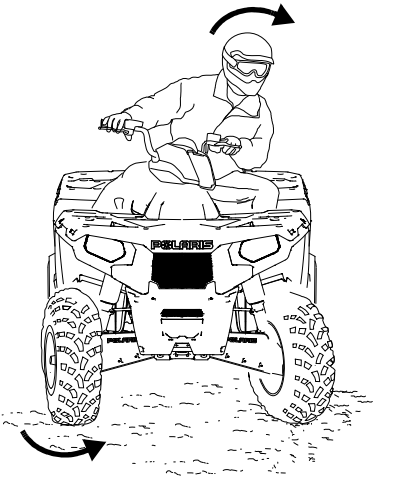
See your POLARIS dealer for engine heater kits, which provide quicker warm-ups and easier starting in colder weather.

OPERATION
Driving Procedures



1. Wear a helmet and eye protection. See page 8.
2. Sit upright with both feet on the footrests and both hands on the handlebars.
3. Start the engine and allow it to warm up.
4. Shift the transmission into gear.
5. Check your surroundings and determine your path of travel.
6. Release the parking brake.
7. Slowly depress the throttle with your right thumb and begin driving.
8. Drive slowly. Practice maneuvering and using the throttle and brakes on level surfaces.

Turning the Vehicle



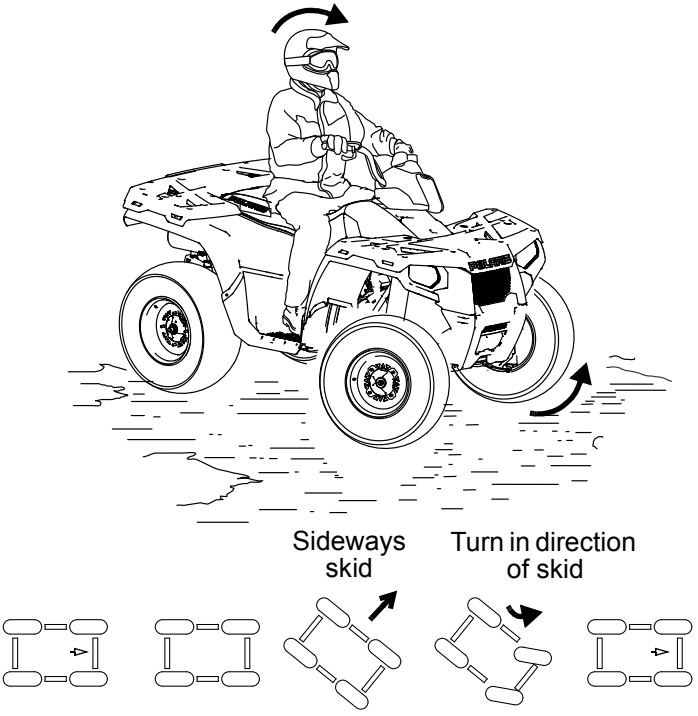
Your ATV is equipped with a solid rear axle, which drives both rear wheels equally at all times. This means that the wheel on the outside of the turn must travel a greater distance than the inside wheel when turning and the inside tire must slip traction slightly.

To turn, steer in the direction of the turn, leaning your upper body to the inside of the turn while supporting your weight on the outer footrest. This technique alters the balance of traction between the rear wheels, allowing the turn to be made smoothly. The same leaning technique should be used for turning in reverse.

Practice making turns at slow speeds before attempting to turn at faster speeds.

WARNING! Turning improperly can result in vehicle overturn. Never turn abruptly or at sharp angles. Never turn at high speeds.

OPERATION
Driving on Slippery Surfaces



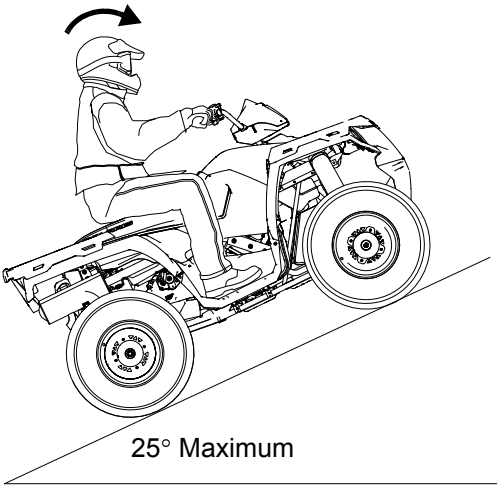
Whenever riding on slippery surfaces such as wet trails or loose gravel, or during freezing weather, follow these precautions:

1. Do not operate on excessively rough, slippery or loose terrain.
2. Slow down when entering slippery areas.
3. Engage AWD before wheels begin to lose traction.

NOTICE: Severe damage to drive train may occur if the AWD is engaged while the wheels are spinning. Allow the rear wheels to stop spinning before engaging AWD, or engage AWD before wheels begin to lose traction.

4. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
5. Never apply the brakes during a skid. Correct a skid by turning the handlebars in the direction of the skid and shifting your body weight forward.

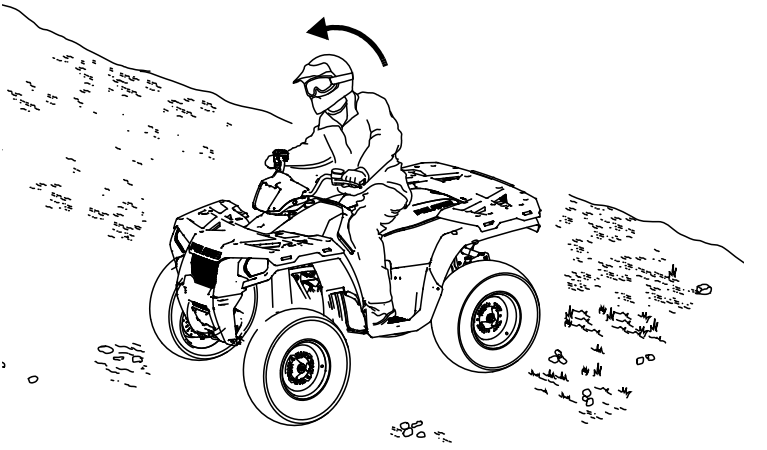
Driving Uphill



Braking and handling are greatly affected when operating in hilly terrain. Improper procedure could cause loss of control or overturn. Whenever traveling uphill, follow these precautions:

1. Drive straight uphill.
2. Avoid steep hills (25° maximum).
3. Always check the terrain carefully before ascending any hill.
4. Never climb hills with excessively slippery or loose surfaces.
5. Keep both feet on the footrests.
6. Shift body weight uphill.
7. Proceed at a steady rate of speed and throttle opening. Opening the throttle suddenly could cause the ATV to flip over backwards.
8. Remain alert and be prepared to take emergency action. This may include quick dismounting of the vehicle.

OPERATION
Driving on a Sidehill (Sidehilling)

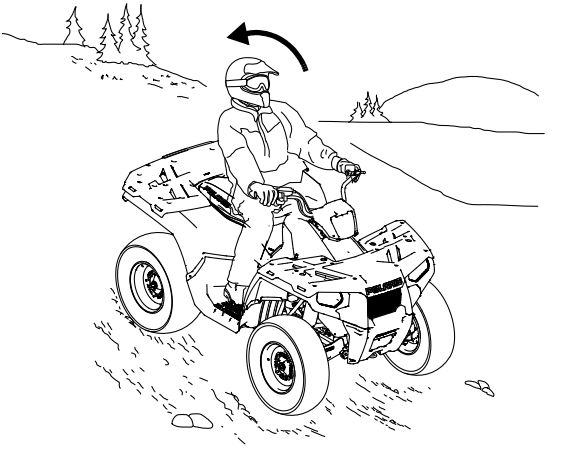


Driving on a sidehill is not recommended. Improper procedure could cause loss of control or overturn. Avoid crossing the side of any hill unless absolutely necessary.

If crossing a sidehill is *unavoidable*, follow these precautions:

1. Slow down.
2. Avoid crossing the side of a steep hill.
3. Shift body weight uphill.
4. Keep your feet on the footrests.
5. If the vehicle begins to tip, quickly turn the front wheel downhill, if possible, or dismount on the uphill side *immediately*!

Driving Downhill

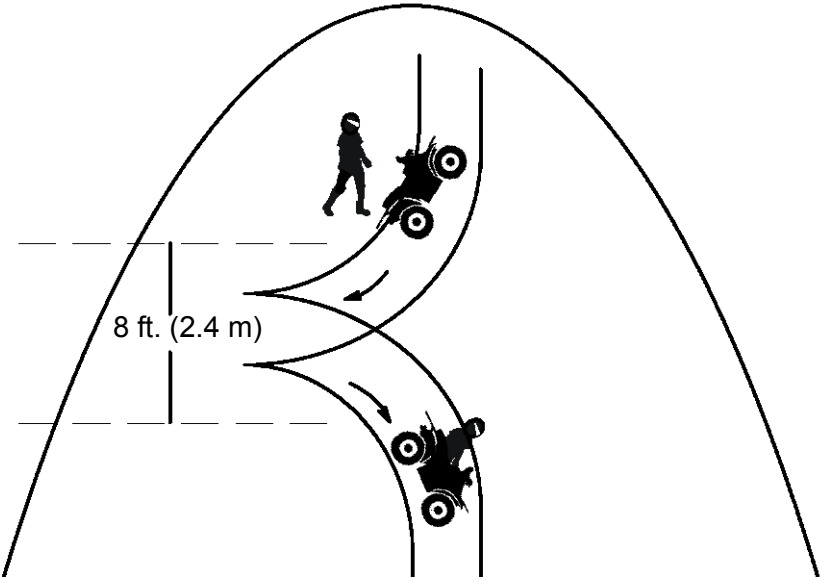


When driving downhill, follow these precautions:

1. Avoid steep hills (25° maximum).
2. Shift body weight uphill.
3. Drive straight downhill.
4. Slow down. Excessive speed when traveling downhill can cause loss of control.
5. Squeeze the brake lever gradually. Applying the brakes too firmly may cause the rear wheels to lock, which could result in loss of control.

OPERATION
Turning Around on a Hill (K-Turn)

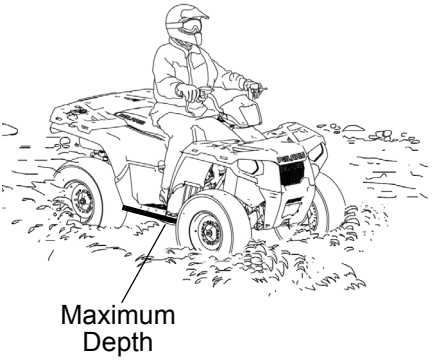
If the vehicle stalls while climbing a hill, never back it down the hill! Use the K-turn to turn around.



1. Stop and lock the parking brake while keeping body weight uphill.
2. Leave the transmission in forward and shut off the engine.
3. Dismount on the uphill side of the vehicle, or on the left if the vehicle is pointing straight uphill.
4. Staying uphill of the vehicle, turn the handlebars full left.
5. While holding the service brake, release the parking brake lock and slowly allow the vehicle to roll around to your right until it's pointing across the hill or slightly downward.
6. Lock the parking brake and remount the vehicle from the uphill side, keeping body weight uphill.
7. Restart the engine with the transmission still in forward.
8. Release the parking brake and proceed *slowly*, controlling speed with the service brake, until the vehicle is on more level ground.

Driving Through Water

Your ATV can operate through water with a maximum recommended depth equal to the bottom of the footrests. Follow these procedures when operating through water:



1. Determine water depths and current before entering water.
2. Choose a crossing where both banks have gradual inclines.
3. Avoid operating through deep or fast-flowing water.

NOTICE: Major engine damage can result if the vehicle is not thoroughly inspected after operation in water. Perform the services outlined in the maintenance chart. See page 70. The following areas need special attention: engine oil, transmission oil, demand drive fluid, rear gearcase oil (if equipped), and all grease fittings.

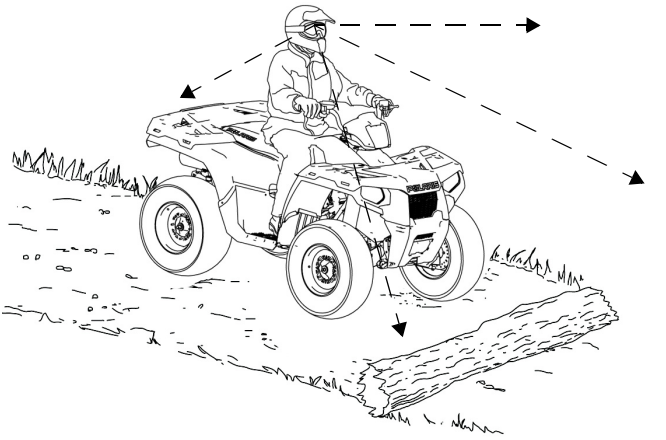
If the vehicle tips or overturns in water, or if the engine stops during or after operating in water, restarting can result in serious engine damage. Transport the vehicle to your dealer for service before restarting the engine. If this is not possible, follow the vehicle immersion inspection and drying procedures outlined on page 100, then see your dealer for service at the first opportunity.

4. After leaving water, test the brakes. Apply them lightly several times while driving slowly. The friction will help dry out the pads.

If it's unavoidable to enter water deeper than the footrest level:

- Proceed slowly. Avoid rocks and obstacles.
- Balance your weight carefully. Avoid sudden movements.
- Maintain a steady rate of speed. Do not make sudden turns or stops. Do not make sudden throttle changes.

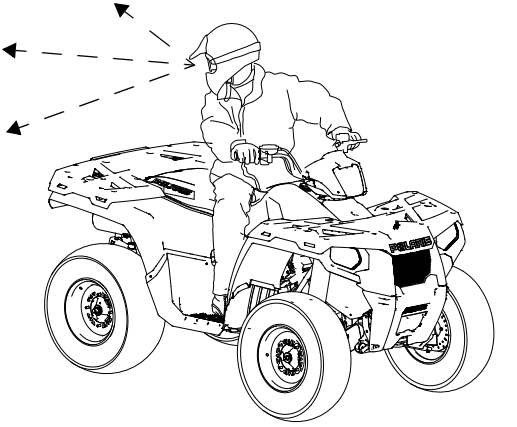
OPERATION
Driving Over Obstacles



Follow these precautions when operating over obstacles:

1. Always check for obstacles before operating in a new area.
2. Look ahead and learn to read the terrain. Be constantly alert for hazards such as logs, rocks and low hanging branches.
3. Travel slowly and use extra caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.
4. Never attempt to operate over large obstacles, such as rocks or fallen trees.

Driving in Reverse



Follow these precautions when operating in reverse:

1. Always check for obstacles or people behind the vehicle.
2. Always avoid backing downhill.
3. Back slowly.
4. Apply the brakes *lightly* for stopping.
5. Avoid turning at sharp angles.
6. Never open the throttle suddenly.
7. Do not use the override button unless additional wheel speed is required for vehicle movement. Use the override with caution as rearward vehicle speed is greatly increased. Do not operate at wide open throttle. Operate the throttle just enough to maintain a desired speed.

NOTICE: Excessive throttle operation while in the speed limit mode may cause fuel to build in the exhaust, resulting in engine popping and/or engine damage.

OPERATION
Hauling Cargo

⚠ WARNING

Overloading the vehicle or carrying or towing cargo improperly can alter vehicle handling and may cause loss of control or brake instability, which can result in serious injury or death. Always follow these precautions when hauling cargo:

REDUCE SPEED AND ALLOW GREATER DISTANCES FOR BRAKING WHEN HAULING CARGO.

NEVER EXCEED THE MAXIMUM WEIGHT CAPACITY of the vehicle. When determining the weight you are adding to the vehicle, include the weight of the operator, accessories, loads in the rack or box and the load on the trailer tongue. The combined weight of these items must not exceed the maximum weight capacity.

CARGO WEIGHT DISTRIBUTION should be 1/3 on the front rack and 2/3 on the rear rack. When operating over rough or hilly terrain, reduce speed and cargo to maintain stable driving conditions. Carrying loads on only one rack increases the possibility of vehicle overturn.

CARRY LOADS AS LOW ON THE RACKS AS POSSIBLE. Carrying loads high on the racks raises the center of gravity of the vehicle and creates a less stable operating condition.

SECURE ALL LOADS BEFORE OPERATING. Unsecured loads can create unstable operating conditions, which could result in loss of control of the vehicle.

OPERATE ONLY WITH STABLE AND SAFELY ARRANGED LOADS. When handling off-centered loads that cannot be centered, securely fasten the load and operate with extra caution. Always attach the tow load to the hitch point designated for your vehicle.

HEAVY LOADS CAN CAUSE BRAKING AND CONTROL PROBLEMS. Use extreme caution when applying brakes with a loaded vehicle. Avoid terrain or situations that may require backing downhill.

USE EXTREME CAUTION when operating with loads that extend over the rack sides. Stability and maneuverability may be adversely affected, causing the vehicle to overturn.

DO NOT BLOCK THE FRONT HEADLIGHT BEAM when carrying loads on the front rack.

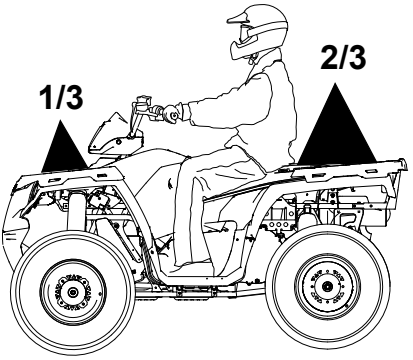
DO NOT TRAVEL FASTER THAN THE RECOMMENDED SPEEDS.

NEVER exceed 50 MPH (80 km/h) when rear cargo loads are above 75 lbs. (34 kg) and/or front cargo loads are above 37 lbs. (17 kg).

Vehicle should never exceed 10 mph (16 kph) while towing a load on a level surface. Vehicle speed should never exceed 5 mph (8 kph) when towing loads in rough terrain, while cornering, or while ascending or descending a hill.

Hauling Cargo

Never exceed the weight capacities specified for your ATV on warning labels and in the specifications section of this manual.



Cargo weight should be evenly distributed (1/3 on the front rack and 2/3 on the rear rack) and mounted as low as possible.

NEVER exceed 50 MPH (80 km/h) when rear cargo loads are above 75 lbs. (34 kg) and/or front cargo loads are above 37 lbs. (17 kg).

When operating over rough or hilly terrain, reduce speed and cargo weight to maintain stable driving conditions.

Do not obstruct the headlight beam with cargo.

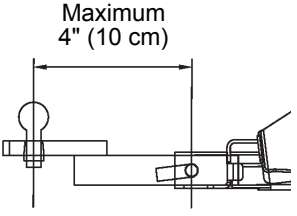
Use low forward gear when hauling or towing heavy cargo to extend belt life.

Towing Loads

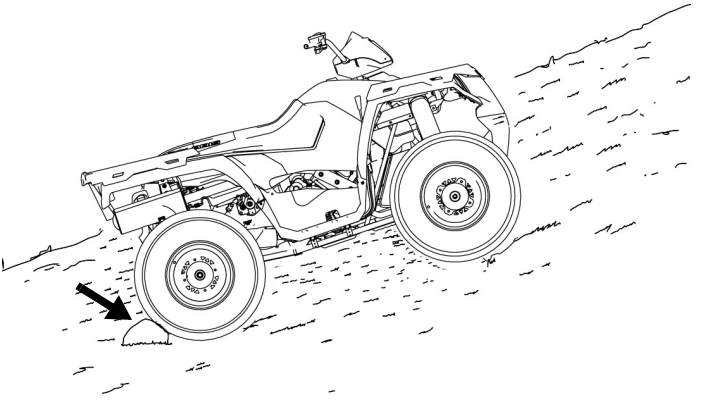
Always attach a towed load to the hitch point. Remove the hitch from the ATV when not towing a trailer. If towing a load, reduce rear rack cargo weight by the amount of tongue weight.

- The combination of rear rack cargo weight and tongue weight must not exceed the rear rack capacity.
- The total load (operator, accessories, cargo and weight on hitch) must not exceed the maximum weight capacity of the vehicle.
- Unbraked Trailer Towing Capacity is 1914 lbs. (868 kg) based on EU Directive 76/432/EC.

NOTICE: Using an improper hitch or exceeding the maximum tongue weight capacity can result in serious damage to the vehicle and will void your ATV warranty. Never install a hitch longer than 4" (10 cm). Never install automotive accessories on your POLARIS ATV. Always install POLARIS-approved (or equivalent) accessories designed for ATV use.



OPERATION
Parking on an Incline



Avoid parking on an incline if possible. If it's unavoidable, follow these precautions:

1. Stop the engine.
2. Place the transmission in PARK.
3. Lock the parking brake.
4. Always block the rear wheels on the downhill side.

The responsibility for safe operation of the winch ultimately rests with you, the operator. Read and understand all safety precautions and operating instructions before operating the winch. Careless operation can result in serious injury. DO NOT use the winch to lift or move people.

Winch Safety Precautions

1. Be alert. Do not operate the winch under the influence of drugs, alcohol or medication.
2. Practice using the winch so you are prepared to use it in an emergency situation.

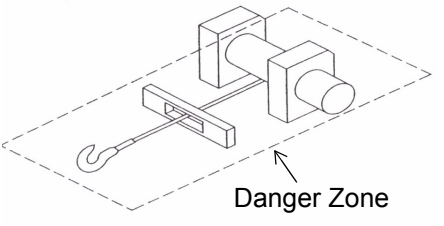
⚠ WARNING

Never connect DC powered winches to AC current. Motor damage or fatal shock may occur.

⚠ DANGER

Stand clear of the cable and load during winching. Keep helpers and spectators at a safe distance. If a cable pulls loose or breaks under the load, it can lash back with dangerous force.

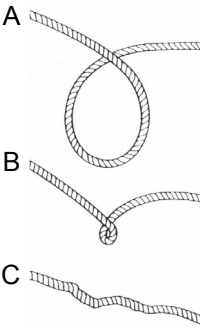
3. Beware of the danger zone. The danger zone is the area of the rotating wire cable drum, the fairlead (if fitted), the cable, the hook and the motor. Before placing hands in or near the danger zone, first relieve tension on load, then disconnect the control switch.



4. If you are within four feet of the winch, do not hold the cable and the remote (if equipped) at the same time.

WINCH GUIDE
Winch Cable Care

1. The life of a cable is directly related to the care it receives. The wire cable on a new winch (and any replacement cables) must be re-spooled under a minimum of a 100-lb. (45.4-kg) load before use. Failure to do this will result in cable damage.
2. Inspect all cable before use. Mashed, pinched, frayed or kinked areas severely reduce the load-carrying capability. Replace damaged cable promptly.
3. Prevent kinks before they occur.
   A. This is a start of a kink. Straighten the cable before using it.
   B. The cable was pulled and the loop has tightened to a kink. The cable is now permanently damaged and should not be used.
   C. The result of kinking is that each strand pulls a different amount of load, causing the strands under the greatest tension to break. This reduces the load capacity of the entire cable.



4. Before re-spooling, remove all load from the cable. Hold the handlebar switch lead in one hand and the cable in the other. Move away from the vehicle as far as the switch will allow. Activate the switch, walk in several feet of cable, then release the switch. Repeat this process until the re-spooling is complete.

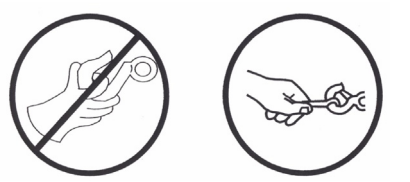
CAUTION! To avoid injury, always release the switch before your hand comes within four feet of the fairlead (the physical opening through which the cable passes).

5. Be sure the cable is distributed evenly and tightly on the drum. A loosely wound drum may allow the cable to work its way down into the layers of cable on the drum and become wedged.
6. Do not grease or oil the cable. Doing so causes dirt contamination that will reduce the life of the cable.

Winch Preparation and Inspection

⚠ DANGER

Wear heavy leather gloves whenever handling cable. Do not allow the cable to slip through your hands, even with gloves on. When handling the hook, always use a handsaver. Never place fingers into the hook. Placing fingers in the hook could result in injury.

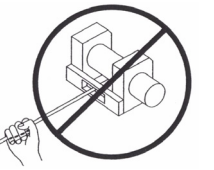


⚠ WARNING

Inspect the switch and wiring for cracks, pinched spots, frayed wire or loose connections. A damaged, shortened lead could cause the winch to operate as soon as it is plugged in.

⚠ DANGER

Never touch the cable or hook while they are in tension or under load. Even at rest, the winch may have the cable in tension. Never guide a cable under tension onto the drum with your hand.



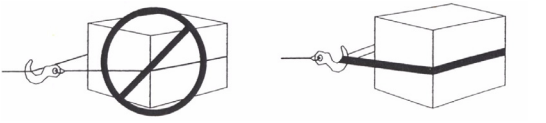
1. Winch with at least five wraps of cable around the winch drum. With fewer wraps, the cable could pull loose from the drum under load.

WINCH GUIDE
Winch Rigging

⚠ WARNING

Take your time when rigging and use extra caution. Improper rigging can result in injury in addition to damage to the vehicle and equipment. Never handle the cable or rigging while another person is at the control switch.

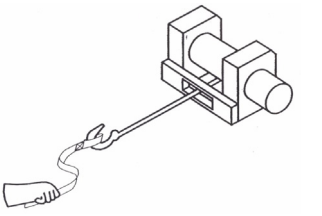
1. Use a nylon sling to attach the cable to an anchor point.



CAUTION! Do not attach the hook back onto the cable. Doing so can cause the cable to break.

⚠ WARNING

Always use a handsaver. Do not hold the hook with your hand. This is important not only when reeling cable in but also when removing cable from the winch under power.



2. Run the winch intermittently to take up cable slack. When using a pulley block, be sure the cable is running properly in all pulleys before applying a load.

CAUTION! Never engage or disengage the clutch if the winch is under load, the cable is in tension or the drum is rotating.

Winch Operation

NOTICE: This winch is designed for intermittent use. Prolonged use may result in damage due to overheating.

1. Use common sense.
2. Take your time.
3. Think through the situation.
4. Pay attention to what is going on when you are winching.
5. DO NOT overheat the winch motor. During extended winching, stop and feel the winch motor. The motor should be cool enough to touch. If not, allow the motor to cool before continuing.
6. Extended winching will discharge your battery. If the low battery warning light comes on, stop winching. Make sure the transmission is in neutral or park, then rev the motor for a few minutes until the warning light goes out. Recharge the battery as soon as possible.
7. DO NOT overload or stall the winch. If the load is greater than the winch is capable of pulling, use a snatch block.
8. Avoid continuous side pulls.
9. Never tow the vehicle by the winch cable.
10. Never use the winch cable as a tie-down.
11. Use an anchor point that is stronger than what you are pulling.
12. DO NOT hook the cable back onto itself. This will damage the cable.

WINCH GUIDE
Winch Operation

13. Use as much cable as possible when pulling. Additional wraps of cable on the spool will significantly reduce the pulling power of your winch. If the winch is still not capable of pulling the load, use a snatch block.
14. Never pull with less than five wraps of cable on the spool.
15. Inspect the condition of the cable prior to pulling. If the cable is frayed or damaged, replace it as soon as possible.
16. DO NOT submerge the winch in water.

Noise Emission Control System

Do not modify the engine, intake or exhaust components, as doing so may affect compliance with governmental noise level requirements.

Spark Arrester

Your POLARIS vehicle has a spark arrester that was designed for on-road and off-road operation. It is required that this spark arrester remain installed and functional when the vehicle is operated.

Exhaust Emission Control System

Exhaust emissions are controlled by engine design. An electronic fuel injection (EFI) system controls fuel delivery. The engine and EFI components are set at the factory for optimal performance and are not adjustable.

Electromagnetic Interference

This vehicle complies with the EMC requirements of European directives 97/24/EC and 2004/108/EC.

Non-ionizing Radiation: This vehicle emits some electromagnetic energy. People with active or non-active implantable medical devices (such as heart monitoring or controlling devices) should review the limitations of their device and the applicable electromagnetic standards and directives that apply to this vehicle.

European Vibration and Noise

The driver-perceived noise and hand/arm and whole body vibration levels of this machinery is measured per prEN 15997.

The operating conditions of the machinery during testing:

The vehicles were in like-new condition. The environment was controlled as indicated by the test procedure(s).

The uncertainty of vibration exposure measurement is dependent on many factors, including:

- Instrument and calibration uncertainty
- Variations in the machine such as wear of components
- Variation of machine operators such as experience or physique
- Ability of the worker to reproduce typical work during measurements
- Environmental factors such as ambient noise or temperature

MAINTENANCE
Periodic Maintenance Chart

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition. Inspection, adjustment and lubrication of important components are explained in the periodic maintenance chart.

Inspect, clean, lubricate, adjust and replace parts as necessary. When inspection reveals the need for replacement parts, use genuine POLARIS parts available from your POLARIS dealer.

Record maintenance and service in the Maintenance Log beginning on page 128.

Service and adjustments are important for proper vehicle operation. If you're not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

Maintenance intervals in the following chart are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour. Vehicles subjected to severe use must be inspected and serviced more frequently.

Severe Use Definition

- Frequent immersion in mud, water or sand
- Racing or race-style high RPM use
- Prolonged low speed, heavy load operation
- Extended idle
- Short trip cold weather operation

Pay special attention to the oil level. A rise in oil level during cold weather can indicate contaminants collecting in the oil sump or crankcase. Change oil immediately if the oil level begins to rise. Monitor the oil level, and if it continues to rise, discontinue use and determine the cause or see your dealer.

Periodic Maintenance Chart

⚠ WARNING

Improperly performing the procedures marked with a ■ could result in component failure and cause an accident, which may result in serious injury or death. Always have an authorized POLARIS dealer perform these services.

Maintenance Chart Key

- ▶ Perform these operations more often for vehicles subjected to severe use.
- ■ Have an authorized POLARIS dealer perform these services.

MAINTENANCE
Periodic Maintenance Chart

Perform all services at whichever maintenance interval is reached first.

Item		Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
■	Steering	-	Pre-Ride	-	Make adjustments as need ed. See Pre-Ride Checklist on page 46.
▶	Front suspension	-	Pre-Ride	-	
▶	Rear suspension	-	Pre-Ride	-	
	Tires	-	Pre-Ride	-	
▶	Brake fluid level	-	Pre-Ride	-	
▶	Brake lever travel	-	Pre-Ride	-	
	Brake system	-	Pre-Ride	-	
	Wheels/fasteners	-	Pre-Ride	-	
	Frame fasteners	-	Pre-Ride	-	
▶	Engine oil level	-	Pre-Ride	-	
	Winch	-	Pre-Ride	-	See pages 64-65.
▶	Air filter, pre-filter	-	Daily	-	Inspect; clean often; replace as needed
▶	Air box sediment tube	-	Daily	-	Drain deposits when visible
	Coolant (if applicable)	-	Daily	-	Check level daily, change coolant every 2 years
	Headlamp/taillight	-	Daily	-	Check operation; apply dielectric grease if replacing
▶	Air filter, main element	-	Weekly	-	Inspect; replace as needed
	Recoil housing (if applicable)	-	Weekly	-	Drain water as needed, check often if operating in wet conditions
▶ ■	Brake pad wear	10 H	Monthly	100 (160)	Inspect periodically
	Battery	20 H	Monthly	200 (320)	Check terminals; clean; test
▶	Demand drive fluid	25 H	Monthly	250 (400)	Inspect level; change yearly
▶	Rear gearcase oil (if equipped)	25 H	Monthly	250 (400)	Inspect level; change yearly
▶	Transmission oil	25 H	Monthly	250 (400)	Inspect level; change yearly
▶	Engine breather filter (if equipped)	25 H	Monthly	250 (400)	Inspect; clean if needed

▶ Perform these procedures more often for vehicles subjected to severe use.
■ Have an authorized POLARIS dealer perform these services.

Periodic Maintenance Chart

	Item	Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
▶	General lubrication	50 H	3 M	500 (800)	Lubricate all fittings, pivots, cables, etc.
■	Throttle Cable/ ETC Switch	50 H	6 M	500 (800)	Inspect; adjust; lubricate; replace if necessary
	Throttle Body Intake Duct	50 H	6 M	500 (800)	Inspect duct for proper sealing/air leaks
	Drive belt	50 H	6 M	500 (800)	Inspect; adjust; replace as needed
	Cooling system (if applicable)	50 H	6 M	1000 (1600)	Inspect coolant strength seasonally; pressure test system yearly
▶	Engine oil change	100 H	6 M	1000 (1600)	Perform a break-in oil change at one month
▶	Oil filter change	100 H	6 M	1000 (1600)	Replace with oil change
■	Valve clearance	100 H	12 M	1000 (1600)	Inspect; adjust
	Fuel system	100 H	12 M	1000 (1600)	Check for leaks at tank cap, lines, filter, pump; replace lines every two years
▶	Radiator	100 H	12 M	1000 (1600)	Inspect; clean external surfaces
▶	Cooling hoses (if applicable)	100 H	12 M	1000 (1600)	Inspect for leaks
▶	Engine mounts	100 H	12 M	1000 (1600)	Inspect
	Exhaust muffler/ pipe	100 H	12 M	1000 (1600)	Inspect
■	Spark plug	100 H	12 M	1000 (1600)	Inspect; replace as needed
▶	Wiring	100 H	12 M	1000 (1600)	Inspect for wear, routing, security; apply dielectric grease to connectors subjected to water, mud, etc.

MAINTENANCE
Periodic Maintenance Chart

	Item	Maintenance Interval (whichever comes first)			Remarks
		Hours	Calendar	Miles (Km)	
■	Clutches (drive and driven)	100 H	12 M	1000 (1600)	Inspect; clean; replace worn parts
■	Front wheel bearings	100 H	12 M	1000 (1600)	Inspect; replace as needed
■	Brake fluid	200 H	24 M	2000 (3200)	Change every two years
▶ ■	Fuel filter	200 H	24 M	2000 (3200)	Check for leaks around lines. Replace every 2 years, more often under extreme conditions.
	Spark arrester	300 H	36 M	3000 (4800)	Clean out
■	Toe adjustment	-			Inspect periodically; adjust when parts are replaced
	Headlight aim	-			Adjust as needed

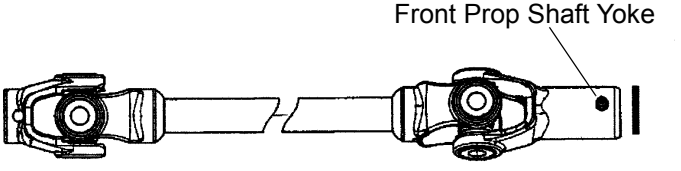
▶ Perform these procedures more often for vehicles subjected to severe use.
■ Have an authorized POLARIS dealer perform these services.

Lubrication Guide

Check and lubricate all components at the intervals outlined in the Periodic Maintenance Chart beginning on page 70. Items not listed in the chart should be lubricated at the General Lubrication interval.

The a-arms and lower control arms are lubricated at the factory, and no additional lubrication will be needed. However, if these components are subjected to severe use, grease zerks have been provided for additional lubrication at the user's discretion.

Item	Lube	Capacity at Fluid Change	Inspection Procedure
Engine Oil	PS-4 PLUS Performance Synthetic 2W-50	2 qt. (1.9 l)	See page 76.
Brake Fluid	DOT 4 Only	---	See page 30.
Transmission Oil	AGL PLUS Transmission Fluid	32 oz. (946 ml)	See page 79.
Demand Drive Fluid (Front Gearcase)	Demand Drive Plus Fluid	9 oz. (265 ml)	See page 81.
Front Prop Shaft Yoke	POLARIS Premium U-Joint Lube	---	Grease fittings (3 pumps maximum) every 500 miles, before long periods of storage, or after pressure washing or submerging.



MAINTENANCE
Engine Oil
Oil Recommendations

POLARIS recommends the use of POLARIS PS-4 *PLUS Performance* Synthetic 2W-50 4-cycle oil or a similar oil for this engine. Oil may need to be changed more frequently if POLARIS oil is not used. Always use 2W-50 oil. Follow the manufacturer's recommendations for ambient temperature operation. See page 124 for the part numbers of POLARIS products.

NOTICE: Mixing brands or using a non-recommended oil may cause serious engine damage. Always use the recommended oil. Never substitute or mix oil brands.

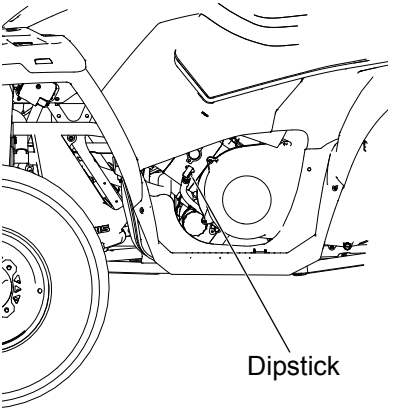
Oil Level

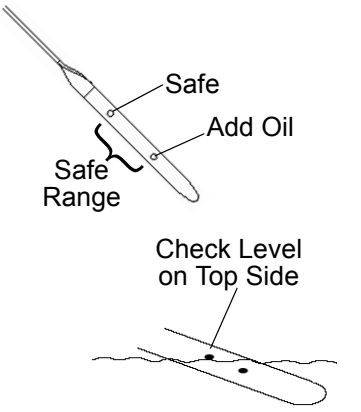
Access the oil dipstick and fill tube from the left side of the ATV.

1. Position the vehicle on a level surface.
2. Lift the lever lock to remove the dipstick. Wipe it dry with a clean cloth.
3. Reinstall the dipstick completely, but do not lock it. The dipstick must be inserted completely to keep the angle and depth of the stick consistent.
4. Remove the dipstick and check the oil level. Maintain the oil level in the safe range. Do not overfill.

Tip: Due to the dipstick entry angle into the crankcase, the oil level will read higher on the bottom side of the dipstick. Always read the level on the upper surface of the dipstick.

5. After reinstalling the dipstick, seat the lever lock.



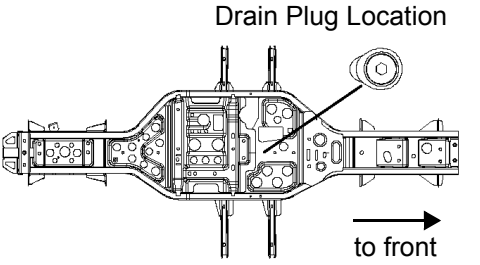


Engine Oil

Oil and Filter Change

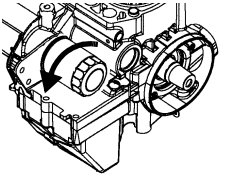
Always change the oil and filter at the intervals outlined in the Periodic Maintenance Chart beginning on page 70. Always change the oil filter whenever changing oil.

1. Position the vehicle on a level surface.
2. Start the engine. Allow it to warm up at idle for two to three minutes.
3. Stop the engine.
4. Clean the area around the drain plug.
5. Place a drain pan under the crankcase.
6. Remove the drain plug. Allow the oil to drain completely.



CAUTION! Hot oil can cause burns to skin. Do not allow hot oil to contact skin.

7. Install a new sealing washer on the drain plug. The sealing surfaces on drain plug and crankcase should be clean and free of burrs, nicks or scratches.
8. Reinstall the drain plug. Torque to 20 ft. lbs. (27 Nm).
9. Place shop towels beneath the oil filter. Using an oil filter wrench (available from your POLARIS dealer), turn the filter counterclockwise to remove it.
10. Using a clean dry cloth, clean the filter sealing surface on the crankcase.

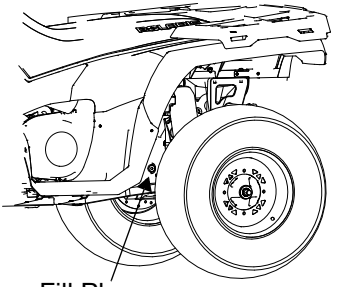


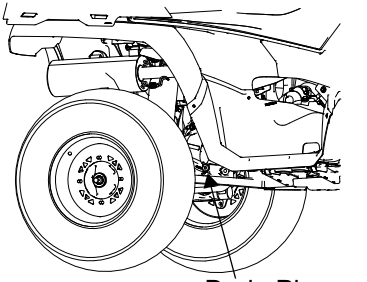
11. Lubricate the o-ring on the new filter with a film of fresh engine oil. Check to make sure the o-ring is in good condition.
12. Install the new filter and rotate it clockwise by hand until the filter gasket contacts the sealing surface, then turn it an additional 1/2 turn.
13. Remove the dipstick.
14. Add two quarts (1.9 l) of recommended oil.
15. Place the transmission in PARK.
16. Lock the parking brake.
17. Start the engine. Allow it to idle for one to two minutes.
18. Stop the engine.
19. Check for leaks.
20. Check the oil level. Add oil as needed to bring the level to the upper mark on the dipstick.
21. Dispose of used filter and oil properly.

Transmission Oil

Always check and change the transmission oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 70. Maintain the oil level at the bottom of the fill plug hole threads. See page 124 for the part numbers of POLARIS products.

The fill plug is located on the left side of the ATV, under the rear fender, behind the wheel. The drain plug is located on the right side of the gearcase, on the right side of the ATV, behind the wheel well.

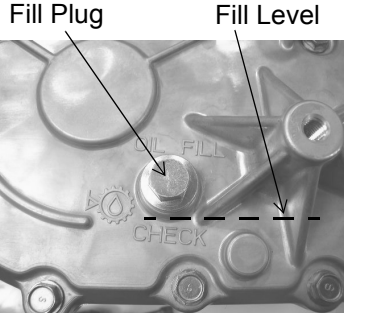




Transmission Oil Recommendations

Lubricant	Capacity	Fill Plug Torque	Drain Plug Torque
AGL PLUS Transmission Fluid	32 oz. (946 ml)	10-14 ft. lbs. (14-19 Nm)	10-14 ft. lbs. (14-19 Nm)

MAINTENANCE
Transmission Oil
Oil Check



1. Position the vehicle on a level surface.
2. Remove the fill plug. Check the oil level.
3. Add the recommended fluid as needed to bring the level to the bottom of the fill hole threads.
4. Reinstall the fill plug. Torque to specification.

Oil Change

1. Remove the fill plug.
2. Place a drain pan under the gearcase. Remove the drain plug. Allow the oil to drain completely.
3. Clean and reinstall the drain plug. Torque to specification.
4. Add the proper amount of the recommended oil.
5. Reinstall the fill plug. Torque to specification.
6. Check for leaks.
7. Dispose of used oil properly.

Front Gearcase (Demand Drive) Fluid

Always check and change the demand drive fluid at the intervals outlined in the Periodic Maintenance Chart beginning on page 70. We recommend the use of Demand Drive Plus Fluid. Use of other fluids may result in improper operation of components. See page 124 for the part numbers of POLARIS products.

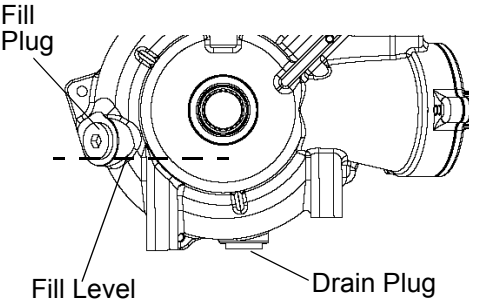
Maintain the fluid level at the bottom of the fill hole threads. See below for capacity.

Demand Drive Capacity	
Demand Drive	9 oz. (265 ml)

The fill plug is located on the right side of the demand drive unit. The drain plug is located on the bottom right side of the unit.

Fluid Check

1. Position the vehicle on a level surface. Remove the fill plug. Check the fluid level.
2. Add the recommended fluid as needed to bring the level to the bottom of the fill hole threads.
3. Reinstall the fill plug. Torque to 8-10 ft. lbs. (11-14 Nm).



Fluid Change

1. Position the vehicle on a level surface. Remove the fill plug.
2. Place a drain pan under the demand drive unit. Remove the drain plug. Allow the fluid to drain completely.
3. Clean and reinstall the drain plug. Torque to 11 ft. lbs. (15 Nm).
4. Add the recommended fluid. See table above for capacity.
5. Reinstall the fill plug. Torque to 8-10 ft. lbs. (11-14 Nm).
6. Check for leaks. Dispose of used fluid properly.

MAINTENANCE
Cooling System

The engine coolant level is controlled, or maintained, by the recovery system. The recovery system components are the recovery bottle, the radiator filler neck, the radiator pressure cap and the connecting hose.

As coolant operating temperature increases, the expanding (heated) excess coolant is forced out of the engine, past the pressure cap, and into the recovery bottle. As engine coolant temperature decreases the contracting (cooled) coolant is drawn back up from the bottle, past the pressure cap, and into the radiator.

Some coolant level drop on new vehicles is normal as the system is purging itself of trapped air. Check the coolant level and maintain as recommended by adding coolant to the recovery bottle.

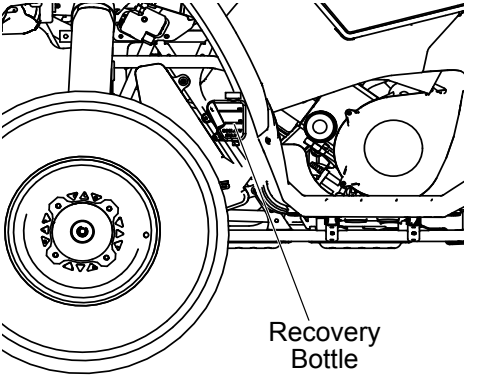
POLARIS recommends the use of POLARIS Premium 60/40 anti-freeze/coolant or a 50/50 mixture of high quality aluminum compatible anti-freeze/coolant and distilled water. POLARIS Premium 60/40 is already premixed and ready to use. Do not dilute with water. See page 124 for the part numbers of POLARIS products.

Always follow the manufacturer's mixing recommendations for the freeze protection required in your area.

Recovery Bottle Coolant

The recovery bottle is located on the left side of the vehicle.

1. Remove the left side panel. See page 88.
2. Maintain the coolant level between the minimum and maximum marks on the bottle (when the fluid is cool).
3. Add coolant as needed.



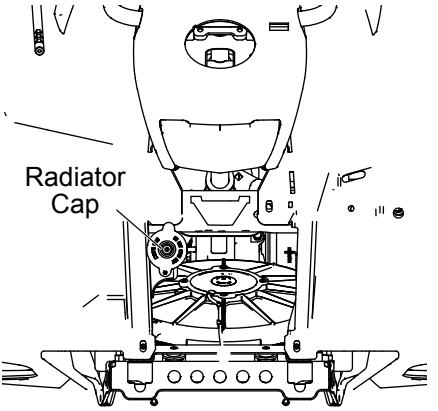
Cooling System

Radiator Coolant

To ensure that the coolant maintains its ability to protect the engine, POLARIS recommends that you drain the system completely every two years and add a fresh mixture of antifreeze and water.

Replace the coolant any time the cooling system has been drained for maintenance or repair. If the recovery bottle has run dry, check the level in the radiator. Add coolant as needed.

CAUTION! Escaping steam can cause burns. Never remove the pressure cap while the engine is warm or hot. Always allow the engine to cool before removing the pressure cap.



1. Open the front box cover.
2. Remove the access panel screws. Squeeze the outer edges of the panel inward to remove the panel.
3. Remove the pressure cap.
4. Using a funnel, slowly add coolant through the radiator filler neck.
5. Reinstall the pressure cap. Use of a non-standard pressure cap will not allow the recovery system to function properly. Contact your dealer for the correct replacement part.
6. Reinstall the access panel and secure the front box cover.

MAINTENANCE

Brakes

Hand Brake

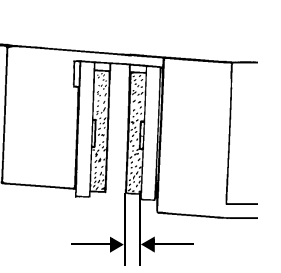
The front and rear brakes are hydraulic disc brakes, activated by moving the single brake lever toward the handlebar. These brakes are self-adjusting.

Under normal operation, the diaphragm extends into the reservoir as fluid level drops. If the fluid level is low and the diaphragm is not extended, a leak is likely and the diaphragm should be replaced. To ensure proper diaphragm operation, always fill the reservoir as needed whenever the cover is loosened or removed. Do not overfill.

WARNING! An over-full master cylinder may cause brake drag or brake lock-up, which could result in serious injury or death. Maintain brake fluid at the recommended level. Do not overfill.

The following checks are recommended to keep the brake system in good operating condition. Check more often if brakes are used heavily under normal operation.

1. Always keep brake fluid at an adequate level. See page 30.
2. Check the brake system for fluid leaks.
3. Check the brakes for excessive travel or spongy feel.
4. Check the friction pads for wear, damage and looseness. Replace brake pads when they are worn to 3/64" (1 mm).
5. Check the security and surface condition of the disc.



Auxiliary Foot Brake

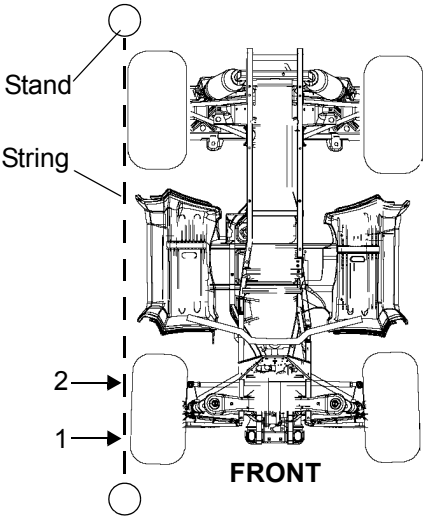
The hydraulic auxiliary brake system requires no adjustment. Check the brake fluid level frequently for the auxiliary brake system. See page 32.

Toe Alignment

Use the following procedure to check the toe alignment of the vehicle. The recommended toe alignment is 1/8" to 1/4" (3-6 mm) toe out.

WARNING! Severe injury or death can result from improper toe alignment and adjustment. Do not attempt to adjust tie rod alignment. All tie rod adjustments should be performed by an authorized POLARIS dealer.

1. Position the vehicle on a level surface.
2. Place the handlebars in a straight-ahead position.
3. Tie a length of string between two stands as shown in the illustration. Position the stands so that the string is flush with the side of the rear tire. If available, you may use a long straight-edge instead of string.



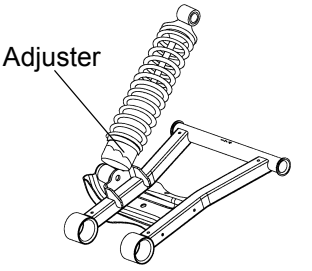
4. Measure the distance from the string to the rim at the front (1) and rear (2) of the front rim. The rear measurement should be 1/16"-1/8" (2-3 mm) more than the front measurement on each side of the vehicle to obtain the recommended 1/8" to 1/4" (3-6 mm) toe out alignment.
5. Repeat the measurement procedure on the other side of the vehicle.
6. If you discover improper alignment, see your POLARIS dealer for service.

MAINTENANCE
Camber and Caster

The camber and caster are non-adjustable.

Rear Spring

The rear shock absorber spring is adjusted by rotating the adjuster either clockwise or counter-clockwise to increase or decrease spring tension. Accessory springs are available through your POLARIS dealer.

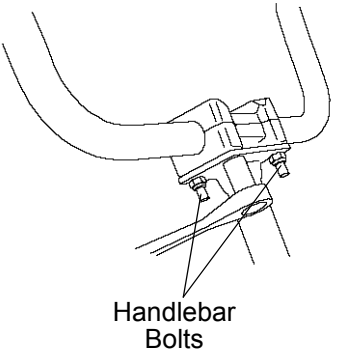


Handlebars

The handlebars can be adjusted for rider preference.

WARNING! Improper adjustment of the handlebars or incorrect torquing of the adjuster block tightening bolts can cause limited steering or loosening of the handlebars, resulting in loss of control and serious injury or death. Follow the adjustment procedures exactly, or see your POLARIS dealer for service.

1. Remove the upper headlight pod.
2. Loosen the four handlebar bolts.
3. Adjust the handlebar to the desired height.
4. Be sure the handlebars do not contact the gas tank or any other part of the machine when turned fully to the left or right.
5. Torque the front two bolts to 10-12 ft. lbs. (14-17 Nm), then torque the rear two bolts. A gap of up to 1/8" (3 mm) will remain at the rear of the clamp blocks.



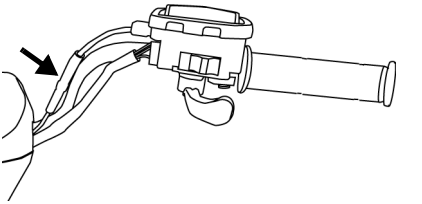
Throttle Body/Idle RPM

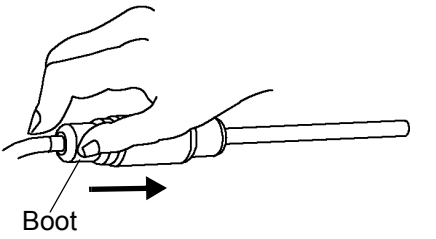
Idle RPM is preset by the manufacturer. If the engine idle speed is not satisfactory, please see your POLARIS dealer for adjustment.

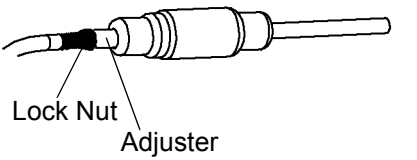
Throttle Cable Freeplay

Adjust throttle cable freeplay at the handlebar.

1. Locate the throttle cable adjuster at the handlebar.
2. Squeeze the end of the rubber boot and slide it far enough to expose the end of the inline cable adjuster.
3. Loosen the adjuster lock nut.
4. Rotate the boot to turn the adjuster until 1/16" to 1/8" (1.5-3 mm) of freeplay is achieved at the thumb lever. While adjusting freeplay, be sure to flip the throttle lever back and forth.
5. Tighten the lock nut.
6. Squeeze the end of the rubber boot and slide it over the cable adjuster to its original position.







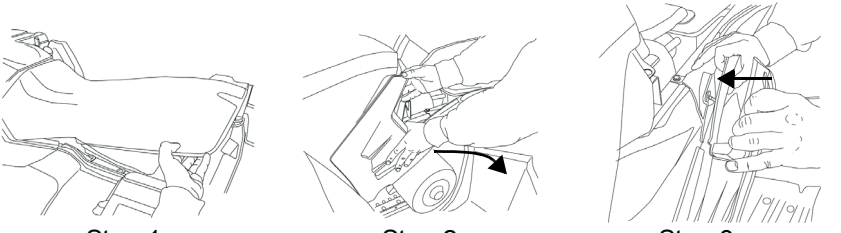
MAINTENANCE

Steering Assembly

The steering assembly of the ATV should be checked periodically for loose nuts and bolts. If loose nuts and bolts are found, see your POLARIS dealer for service before operating the vehicle.

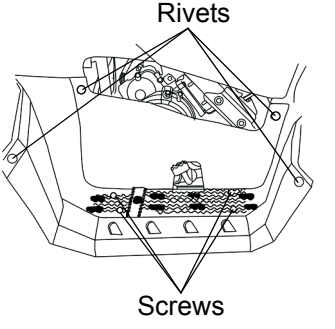
Side Panel Removal

1. Remove the seat.
2. Grasp the rear of the side panel near the rear cab. With a firm motion, pull the panel outward to disengage the side panel from the grommet. Pull the panel downward and rearward to remove it.
3. When reinstalling side panels, align the fasteners and press firmly to secure them.



Footwell Removal

1. Remove the four screws on the bottom of the footwell.
2. Use a flat screwdriver or sidecutters to remove the plastic rivets securing the footwell to the fenders.
3. Remove the footwell.



Tires

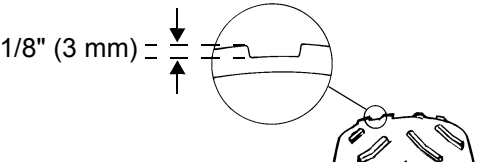
⚠ WARNING

Operating your ATV with worn tires, improperly inflated tires, non-standard tires or improperly installed tires will affect vehicle handling and could cause an accident resulting in serious injury or death. Always follow all tire maintenance procedures as outlined in this manual and on the labels on the vehicle. Always use original equipment size and type when replacing tires.

Refer to the specifications section beginning on page 122 for recommended tire type, size and pressure.

Tire Tread Depth

Always replace tires when tread depth is worn to 1/8" (3 mm) or less.



Front Wheel Hub Tightening

Front wheel bearing tightness and spindle nut retention are critical component operations. All service must be performed by your authorized POLARIS dealer.

Wheel Removal

1. Stop the engine.
2. Place the transmission in PARK.
3. Lock the parking brake.
4. Loosen the wheel nuts slightly.

WARNING! Do not service axle nuts that have a cotter pin installed. See your POLARIS dealer.

5. Elevate the side of the vehicle by placing a suitable stand under the footrest frame.
6. Remove the wheel nuts.
7. Remove the wheel.

MAINTENANCE

Tires

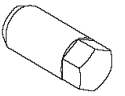
Wheel Installation

1. Place the transmission in PARK.
2. Lock the parking brake.
3. Place the wheel on the hub with the valve stem toward the outside and rotation arrows on the tire pointing toward forward rotation.
4. Install the wheel nuts and finger-tighten them.
5. Lower the vehicle to the ground.
6. Torque the wheel nuts to specification.

WARNING! Loose nuts could cause a tire to come off during operation, which could result in an accident or overturn. Always ensure that all nuts are torqued to specification.

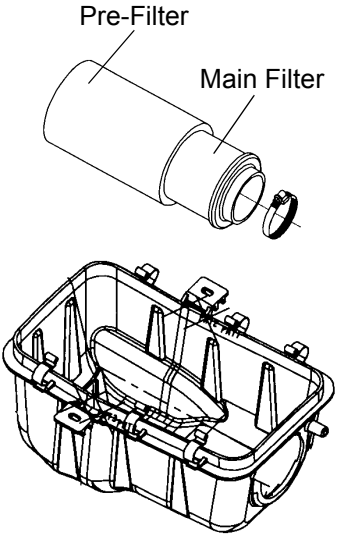
Wheel Nut Torque Specifications

Check the wheel nut torques occasionally and when they've been loosened for maintenance service.

Nut Type	Nut Torque
Lug Nut (Aluminum Wheels) 	30 ft. lbs. (41 Nm) PLUS 1/4 TURN
2-Piece Flange Nut (Steel Wheels)	27 ft. lbs. (37 Nm)

Air Filter

1. Remove the seat.
2. Release the air box cover clips, and remove the air box cover.
3. Loosen the clamp and remove the filter.
4. Remove the fabric type pre-filter from the main filter. Wash the pre-filter in soapy water, then rinse and let dry.
5. Reinstall the pre-filter over the main filter. Install a new main filter if needed.
6. Reinstall the filter into the air box and tighten the clamp. Do not over-tighten the clamp, as filter damage could occur.
7. Reinstall the air box cover and the seat.

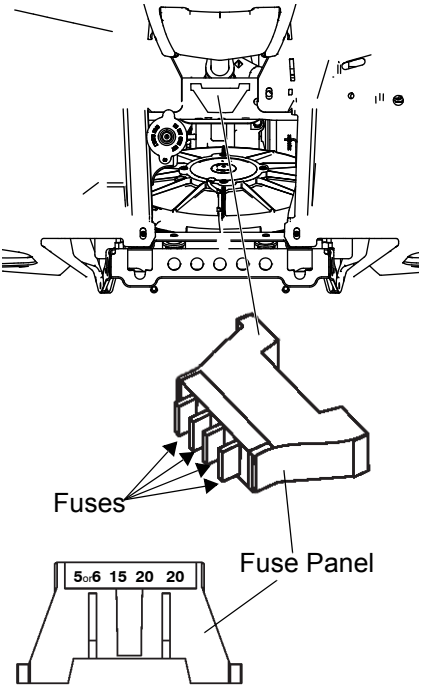


MAINTENANCE
Fuse Replacement

Fuse	Feature Supported
5A	Speedometer
15A	Electronic Fuel Injection
20A	(Main Fuse) Ignition, Lighting
20A	Accessories, 12V Power Receptacle

If the engine stops or will not start, or if you experience other electrical failures, a fuse may need replacement. Locate and correct any short circuits that may have caused the blown fuse, then replace the fuse. Spare fuses are provided in a compartment on the top of the access door.

1. Open the front box cover.
2. Remove the suspect fuse from the fuse panel. If the fuse is blown, install a new fuse with the same amperage.
3. Secure the front box cover.



Lights

Poor lighting can result in reduced visibility when driving. Headlight and taillight lenses become dirty during normal operation. Clean lights frequently and replace burned out lamps promptly. Always make sure lights are adjusted properly for best visibility.

Headlight Lamp Replacement

When servicing a halogen lamp, don't touch the lamp with bare fingers. Oil from your skin leaves a residue, causing a hot spot that will shorten the life of the lamp.

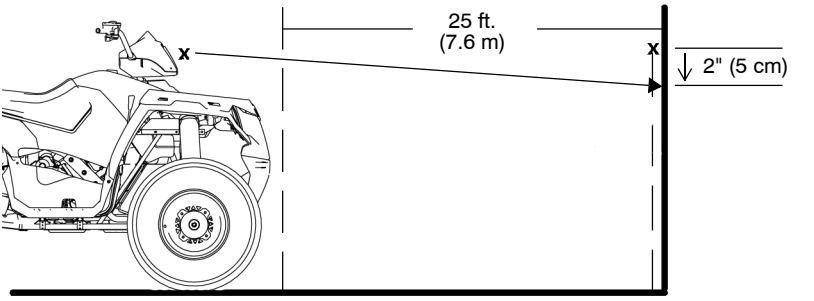
1. Remove the two screws on the lower front corners of the headlight pod.
2. Remove the screw from the rear of the pod.
3. Lift the pod slightly while depressing the tabs at the rear of the pod.
4. Lift the pod cover and disconnect the speedometer harnesses from the speedometer.

CAUTION! Hot components can cause burns to skin. Allow lamps to cool before servicing.

5. Unplug the headlamp from the wiring harness. Be sure to pull on the connector, not on the wiring.
6. Turn the lamp counter-clockwise to remove it.
7. Apply dielectric grease to the socket and install the new lamp. Make sure the tab on the lamp locates properly in the housing.
8. Reassemble the pod.

MAINTENANCE
Lights
High Beam Adjustment

The headlight beam can be adjusted slightly upward or downward. Use the following procedure to make the adjustment.



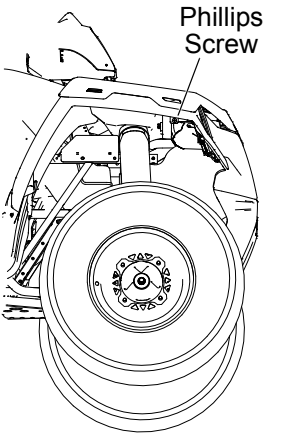
1. Position the vehicle on a level surface with the headlight approximately 25 ft. (7.6 m) from a wall. Place the transmission in PARK.
2. Measure the distance from the floor to the center of the headlight and make a mark on the wall at the same height.
3. Start the engine. Turn the headlight switch to high beam.
4. Observe the headlight aim on the wall. The most intense part of the headlight beam should be two inches (5 cm) below the mark on the wall. Include rider weight on the seat when measuring.
5. The adjustment knob is located on the right side of the headlight pod. Adjust the beam to the desired position by turning the knob either clockwise or counter-clockwise.

Lights

Low Beam Adjustment

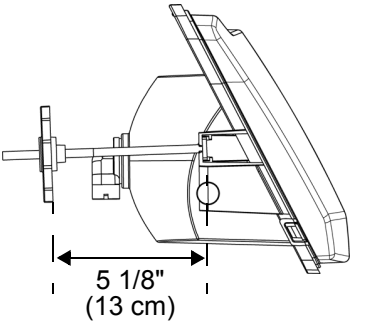
The low beam can be adjusted slightly upward or downward.

1. Loosen the phillips screw located at the rear of the headlamp.
2. Tilt the headlamp upward or downward.
3. Tighten the screw.



MAINTENANCE
Lights
Headlight Housing Replacement

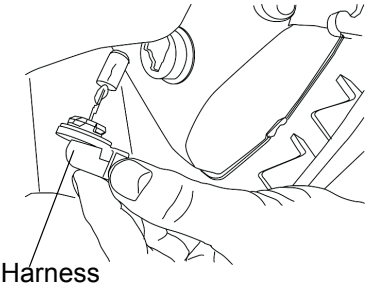
1. Remove the two screws on the lower front corners of the headlight pod.
2. Lift the pod slightly while depressing the tabs at the rear of the pod.
3. Lift the pod cover and disconnect the speedometer harnesses from the speedometer.
4. Unplug the headlamp from the wiring harness.
5. Use a small screwdriver to remove the o-rings from the headlight mounting tabs.
6. Pull the headlight housing up to release it from the locking tabs.
7. Lift the adjusting knob up to remove it from the locking tabs.
8. Carefully pull the assembly up and out of the pod.
9. Reverse the steps to install the new housing and reassemble the pod. The distance from the headlamp parting line to the end of the adjustment knob stop is 5 1/8" (13 cm).
10. Adjust the headlight aim by turning the adjusting knob.



Lights

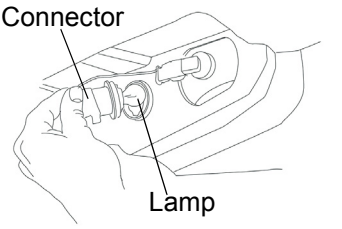
Lower Headlamp Replacement

1. Turn the back of the headlight harness counter-clockwise and pull the harness assembly away from the headlight assembly.
2. Remove the headlamp and install the new headlamp.
3. Reinstall the harness assembly into the headlight assembly.
4. Turn the headlight harness clockwise to secure the headlamp.



Taillight/Brakelight Lamp Replacement

1. Remove the harness connector from the back of the light assembly.
2. Turn the lamp counter-clockwise to remove it.
3. Apply dielectric grease to the socket and install the new lamp.
4. Reinstall the harness connector.
5. Test the light for proper operation.



MAINTENANCE

Spark Plugs

Spark Plug Recommendations

Refer to the specifications section beginning on page 122 for the recommended spark plug type and gap for your vehicle. Torque spark plugs to specification.

NOTICE: Using non-recommended spark plugs can result in serious engine damage. Always use POLARIS-recommended spark plugs.

Plug Condition	Torque Specification
New Spark Plug	9-11 ft. lbs. (12-15 Nm)
Previously Installed Spark Plug	17-20 ft. lbs. (23-27 Nm)

Spark Plug Inspection

Spark plug condition is indicative of engine operation. Check the spark plug firing end condition after the engine has been warmed up and the vehicle has been driven at higher speeds. Immediately check the spark plugs for correct color. See page 99.

CAUTION! A hot exhaust system and engine can cause burns. Wear protective gloves when removing a spark plug for inspection.

1. Rotate the spark plug cap 1/4 turn and pull it off the spark plug.
2. Using the special wrench provided in the tool pouch, rotate the spark plug counter-clockwise to remove it.
3. Reverse the procedure for spark plug installation. Torque to specification.

Spark Plugs

Spark Plug Inspection

Normal Spark Plug

The normal insulator tip is gray, tan or light brown. There will be few combustion deposits. The electrodes are not burned or eroded. This indicates the proper type and heat range for the engine and the service.

The tip should not be flaky and white. A white insulator tip indicates overheating, caused by use of an improper spark plug or incorrect fuel.

Wet Fouled Spark Plug

The wet fouled insulator tip is black. A damp oil film covers the firing end. There may be a carbon layer over the entire nose. Generally, the electrodes are not worn. General causes of fouling are excessive oil, use of non-recommended oil or incorrect throttle body adjustments.

MAINTENANCE
Vehicle Immersion

If your vehicle becomes immersed, major engine damage can result if the machine is not thoroughly inspected. Take the vehicle to your dealer before starting the engine. If it's impossible to take your ATV to a dealer before starting it, follow the steps outlined below.

1. Move the ATV to dry land or at the very least, to water below the footrests.
2. Check the air box. If water is present, dry the air box and replace the filter with a new filter.
3. Remove the spark plugs.
4. Turn the engine over several times using the electric start.
5. Dry the spark plugs. Reinstall the plugs or install new plugs.
6. Attempt to start the engine. If necessary, repeat the drying procedure.
7. Take the ATV to your dealer for service as soon as possible, whether you succeed in starting it or not.
8. If water has been ingested into the PVT, follow the procedure on page 104 for drying out the PVT.

Spark Arrester

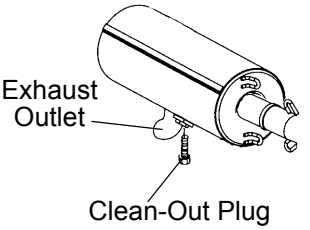
⚠ WARNING

Failure to heed the following warnings while servicing the spark arrester could result in serious injury or death. Never run the engine in an enclosed area. Remove any combustible materials from the area. Wear eye protection and leather work gloves. Do not stand behind or in front of the vehicle while purging. Never go under the vehicle while it's inclined.

The exhaust system can get extremely hot. Do not perform service on the spark arrester while the system is hot. Allow components to cool sufficiently before proceeding.

Use the following procedure to periodically purge accumulated carbon from the exhaust pipe/muffler.

1. Remove the arrester clean-out plug from the bottom of the muffler. Be sure to clean out both arresters if your model has two.
2. Place the transmission in PARK.
3. Start the engine.
4. Quickly squeeze and release the throttle lever several times to purge carbon from the system.



5. If carbon comes out of the exhaust, cover or plug the exhaust outlet. Wear protective gloves.
6. Lightly tap on the exhaust pipe with a rubber mallet while repeating step 4.
7. If particles are still suspected to be in the muffler, elevate the rear of the vehicle one foot (30 cm) higher than the front. Block the wheels.
8. Place the transmission in PARK. Lock the parking brake. Repeat steps 4 to 6 until no more particles are expelled.
9. Stop the engine. Allow the arrester to cool.
10. Reinstall the arrester plug and remove the exhaust outlet cover or plug.

MAINTENANCE
PVT System

⚠ WARNING

Failure to comply with the instructions in this warning can result in severe injury or death.

Do not modify any component of the PVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The PVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.

The PVT system rotates at high speeds, creating large amounts of force on clutch components. Extensive engineering and testing has been conducted to ensure the safety of this product. However, as the owner, you have the following responsibilities to make sure this system remains safe:

- Always follow all recommended maintenance procedures. Always look for and remove debris inside and around the clutch and vent system when replacing the belt.
- See your dealer as outlined in the owner's manual.
- This PVT system is intended for use on POLARIS products only. Do not install it in any other product.
- Always make sure the PVT housing is securely in place during operation.

PVT System

PVT Operation

The basic operation of the POLARIS PVT system is dependent on engine speed and vehicle torque requirements. As engine speed increases, the force exerted on the movable drive sheave by the fly-weights also increases. This, in turn, increases the amount of pinch applied to the drive belt. Similarly, if the engine speed decreases, the amount of centrifugal force decreases, reducing the amount of belt pinch.

On POLARIS ATVs, the approximate gear ratio difference between high and low range is 1:2.25. This difference in gearing affects the operation of the PVT, especially at speeds less than 7 MPH (11 km/h), due to the system's dependence on engine speed.

For example, when operating at a ground speed of 3 MPH (5 km/h) in low range, the engine speed would be around 3000 RPM. This is well above the engagement speed of 1200 - 1400 RPM. However, in high range at 3 MPH (5 km/h), the engine would be running at only 1500 RPM. Whenever operating this close to the engagement speed, the engine may be running at a speed too low to provide the pinch needed to prevent belt slip. Belt slip is responsible for creating the excessive heat that destroys belts, wears clutch components and causes outer clutch covers to fail.

MAINTENANCE
PVT System
PVT Operation

The air temperature in the clutch cover is substantially reduced by using low range while operating at low ground speeds. Reducing the temperature inside the clutch cover greatly extends the life of the PVT components (belt, cover, etc.).

When To Use Low Range and High Range

Condition	Range to Use
Operating at speeds less than 7 MPH (11 km/h)	Low
Towing heavy loads	Low
Operating in rough terrain (swamps, mountains, etc.)	Low
Operating at speeds greater than 7 MPH (11 km/h)	High

PVT Drying

There may be some instances when water is accidently ingested into the PVT system. Use the following instructions to dry it out before operating.

1. Position the vehicle on a level surface.
2. Remove the drain plug. Allow the water to drain completely. Reinstall the drain plug.
3. Start the engine. Place the transmission in PARK.
4. Apply varying throttle for 10-15 seconds to expel the moisture and air-dry the belt and clutches. Do not hold the throttle wide open for more than 10 seconds.
5. Allow the engine RPM to settle to idle speed, then shift the transmission to the lowest available range.
6. Test for belt slippage. If the belt slips, repeat the process.
7. Take the vehicle to your dealer for service as soon as possible.

Battery

⚠ WARNING

Improperly connecting or disconnecting battery cables can result in an explosion and cause serious injury or death. When removing the battery, always disconnect the negative (black) cable first. When reinstalling the battery, always connect the negative (black) cable last.

⚠ WARNING

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing.

Antidote:

External: Flush with water.

Internal: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.

Eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield eyes when working near batteries. KEEP OUT OF REACH OF CHILDREN.

Your ATV may have either a sealed battery, which requires little maintenance, or a conventional battery. A sealed battery can be identified by its flat covers on the top of the battery. A conventional battery has six filler caps on the top of the battery.

Always keep battery terminals and connections free of corrosion. If cleaning is necessary, remove corrosion with a stiff wire brush. Wash with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean shop towels. Coat the terminals with dielectric grease or petroleum jelly. Be careful not to allow cleaning solution or tap water into a conventional battery.

MAINTENANCE
Battery
Battery Removal

1. Disconnect the battery hold-down strap.
2. Remove the battery cover (if equipped).
3. On conventional batteries, remove the battery vent tube.
4. Disconnect the black (negative) battery cable first.
5. Disconnect the red (positive) battery cable last.
6. Lift the battery out of the ATV. Be careful not to tip a conventional battery sideways, which could spill electrolyte.

NOTICE: If electrolyte spills, immediately wash it off with a solution of one tablespoon baking soda and one cup water to prevent damage to the vehicle.

Battery

Battery Installation

Using a new battery that has not been fully charged can damage the battery and result in a shorter life. It can also hinder vehicle performance. Follow the battery charging instructions on page 109 before installing the battery.

1. Ensure that the battery is fully charged.
2. Place the battery in the battery holder.
3. With conventional batteries, install the battery vent tube (sealed batteries do not have a vent tube). The vent tube must be free of obstructions and securely installed. Route the tube away from the frame and vehicle body to prevent contact with electrolyte.

WARNING! Battery gases could accumulate in an improperly installed vent tube and cause an explosion, resulting in serious injury or death. Always ensure that the vent tube is free of obstructions and is securely installed as recommended.

4. On conventional batteries, coat the terminals with dielectric grease or petroleum jelly.
5. Connect and tighten the red (positive) cable first.
6. Connect and tighten the black (negative) cable last.
7. Install the battery cover (if equipped).
8. Secure the battery hold-down strap.
9. Verify that cables are properly routed. Cables should be safely tucked away at the front and rear of the battery.

MAINTENANCE
Battery
Battery Storage

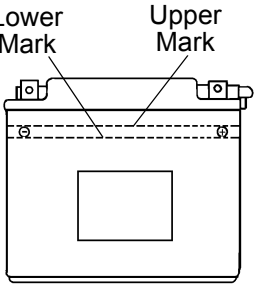
Whenever the vehicle is not used for a period of three months or more, remove the battery from the vehicle, ensure that it's fully charged, and store it out of the sun in a cool, dry place. Check battery voltage each month during storage and recharge as needed to maintain a full charge.

POLARIS recommends maintaining battery charge by using a POLARIS Battery Tender charger or by charging about once a month to make up for normal self-discharge. Battery Tender can be left connected during the storage period, and will automatically charge the battery if the voltage drops below a pre-determined point. See page 124 for the part numbers of POLARIS products.

Battery Fluid (Conventional Battery)

A poorly maintained battery will deteriorate rapidly. Check the battery fluid level often. Maintain the fluid level between the upper and lower level marks.

Add only distilled water. Tap water contains minerals that are harmful to a battery.



Battery

Battery Charging (Conventional Battery)

1. Remove the battery from the vehicle to prevent damage from leaking or spilled electrolyte during charging. See page 106.
2. Charge the battery with a charging output no larger than 1/10 of the battery's amp/hr rating. Charge as needed to raise the specific gravity to 1.270 or greater.
3. Reinstall the battery. See page 107. Make sure the positive terminal is toward the front of the vehicle.

Battery Charging (Sealed Battery)

The following battery charging instructions apply only to the installation of a sealed battery. Read all instructions before proceeding with the installation of this battery.

The sealed battery is already filled with electrolyte and has been sealed and *fully charged* at the factory. *Never* pry the sealing strip off or add any other fluid to this battery.

The single most important thing about maintaining a sealed battery is to keep it fully charged. Since the battery is sealed and the sealing strip cannot be removed, you must use a voltmeter or multimeter to measure DC voltage.

WARNING! An overheated battery may explode, causing severe injury or death. Always watch charging times carefully. Stop charging if the battery becomes very warm to the touch. Allow it to cool before resuming charging.

For a refresh charge, follow all instructions carefully.

1. Check the battery voltage with a voltmeter or multimeter. A fully charged battery will register 12.8 V or higher.
2. If the voltage is less than 12.8 volts, recharge the battery at 1.2 amps or less until battery voltage is 12.8 or greater.
3. When using an automatic charger, refer to the charger manufacturer's instructions for recharging. When using a constant current charger, use the guidelines on the next page for recharging.

MAINTENANCE
Battery
Battery Charging (Sealed Battery)

Always verify battery condition before and 1-2 hours after the end of charging.

State of Charge	Voltage	Action	Charge Time (Using constant current charger @ standard amps specified on top of battery)
100%	12.8-13.0 volts	None, check at 3 mos. from date of manufacture	None required
75%-100%	12.5-12.8 volts	May need slight charge, if no charge given, check in 3 months	3-6 hours
50%-75%	12.0-12.5 volts	Needs charge	5-11 hours
25%-50%	11.5-12.0 volts	Needs charge	At least 13 hours, verify state of charge
0%-25%	11.5 volts or less	Needs charge with desulfating charger	At least 20 hours

Cleaning and Storage

Washing the Vehicle

Keeping your POLARIS vehicle clean will not only improve its appearance but it can also extend the life of various components.

NOTICE: High water pressure may damage components. POLARIS recommends washing the vehicle by hand or with a garden hose, using mild soap.

Certain products, including insect repellents and chemicals, will damage plastic surfaces. Do not allow these types of products to contact the vehicle.

The best and safest way to clean your POLARIS vehicle is with a garden hose and a pail of mild soap and water.

1. Use a professional-type washing cloth, cleaning the upper body first and the lower parts last.
2. Rinse with clean water frequently.
3. Dry surfaces with a chamois to prevent water spots.

Washing Tips

- Avoid the use of harsh cleaners, which can scratch the finish.
- Do not use a power washer to clean the vehicle.
- Do not use medium to heavy duty compounds on the finish.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

MAINTENANCE
Cleaning and Storage
Washing the Vehicle

If a high pressure water system is used for cleaning (not recommended), exercise extreme caution. The water may damage components and could remove paint and decals. Avoid directing the water stream at the following items:

- Wheel bearings
- Radiator
- Transmission seals
- Cab and body panels
- Electrical components
- Switches and controls
- Fuel system components
- Labels and decals

If an informational or graphic label becomes illegible or comes off, contact your POLARIS dealer to purchase a replacement. Replacement *safety* labels are provided by POLARIS at no charge.

Grease all zerk fittings immediately after washing. Allow the engine to run for a while to evaporate any water that may have entered the engine or exhaust system.

Polishing the Vehicle

POLARIS recommends the use of common household aerosol furniture polish for polishing the finish on your POLARIS vehicle. Follow the instructions on the container.

Polishing Tips

- Avoid the use of automotive products, some of which can scratch the finish of your vehicle.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

Cleaning and Storage

Chrome Wheel Care (if equipped)

Proper maintenance will protect chrome wheels from corrosion, preserve wheel life and ensure a “like new” appearance for many years. Chrome wheels exposed to road salt (or salt in the air in coastal areas) are more susceptible to corrosion if not properly cleaned. Clean chrome wheels more often if they're exposed to salt or other corrosive elements.

1. Wash chrome wheels frequently. Use a mild detergent. Never use abrasive cleaners on plated or painted surfaces.
2. Rinse well with clear water. Soap, detergents, salt, dirt, mud and other elements can cause corrosion.
3. Polish the clean chrome wheels periodically. Use an automotive grade chrome polish.
4. Routinely and liberally apply a weather resistant wax to each polished chrome wheel. Choose a product suitable for chrome finishes. Read and follow the product labels and instructions.

Removing Corrosion

If light rust is found on the chrome finish, use steel wool (#0000-OTT grade) to remove it. Gently rub the affected areas with the steel wool until the corrosion has been removed. Clean and polish the wheel as outlined above.

MAINTENANCE
Cleaning and Storage
Storage Tips

NOTICE: Starting the engine during the storage period will disturb the protective film created by fogging and damage could occur. Never start the engine during the storage period.

Clean the Exterior

Make any necessary repairs and then clean the vehicle as recommended. See page 111.

Stabilize the Fuel

1. Fill the fuel tank.
2. Add POLARIS Carbon Clean Fuel Treatment or POLARIS Fuel Stabilizer. Follow the instructions on the container for the recommended amount. Carbon Clean removes water from fuel systems, stabilizes fuel and removes carbon deposits from pistons, rings, valves and exhaust systems.
3. Allow the engine to run for 15-20 minutes to allow the stabilizer to disperse through the entire fuel delivery system.

Oil and Filter

Change the oil and filter. See page 77.

Air Filter / Air Box

1. Inspect and clean (or replace) the pre-cleaner and air filter.
2. Clean the air box.
3. Drain the sediment tube.

Cleaning and Storage

Storage Tips

Fluid Levels

Inspect the following fluid levels. Change fluids as recommended in the Periodic Maintenance Chart beginning on page 70.

- Demand drive unit (front gearcase)
- Rear gearcase (if equipped)
- Transmission
- Brake fluid (change every two years and any time the fluid looks dark or contaminated)
- Coolant (test strength/fill)

Fog the Engine

1. Treat the fuel system with POLARIS Carbon Clean, following the instructions on the can. Run the engine for several minutes so the Carbon Clean reaches the injectors. Stop the engine.
2. Remove the spark plugs and add 2-3 tablespoons of engine oil. To access the plug holes, use a section of clear 1/4" hose and a small plastic squeeze bottle filled with the pre-measured amount of oil.
3. Reinstall the spark plugs. Torque to specification.
4. Apply dielectric grease to the inside of each spark plug cap and reinstall the caps onto the plugs.
5. Turn the engine over several times. Oil will be forced in and around the piston rings and ring lands, coating the cylinder with a protective film of fresh oil.
6. If POLARIS fuel system additive is not used, the fuel tank, fuel lines, and injectors should be completely drained of gasoline.

MAINTENANCE

Cleaning and Storage

Storage Tips

Inspect and Lubricate

Inspect all cables and lubricate all areas of the vehicle as recommended in the Periodic Maintenance Chart beginning on page 70.

Battery Maintenance

Remove the battery and recharge it as outlined on page 109. Store the battery in a cool, dry place.

Storage Area/Covers

Set the tire pressure and safely support the ATV with the tires slightly off the ground. Be sure the storage area is well ventilated. Cover the vehicle with a genuine POLARIS cover. Do not use plastic or coated materials. They do not allow enough ventilation to prevent condensation, and may promote corrosion and oxidation.

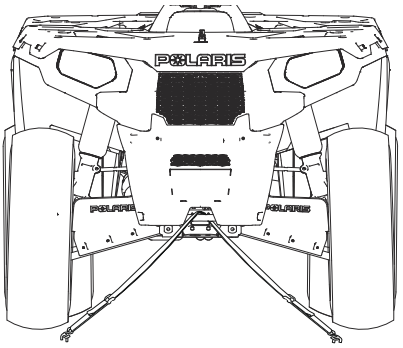
Accessories

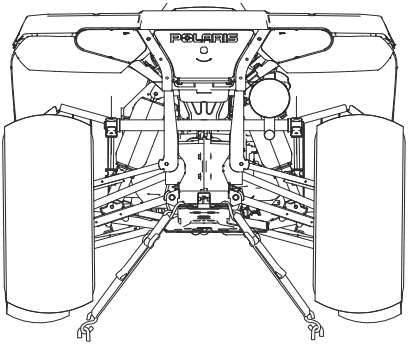
Auxiliary power outlets provide 12-volt power for operating accessories. Accessory outlets are available for all models. POLARIS also has a wide range of additional accessories available for your ATV. Always install accessories that are approved for ATV use. Please see your POLARIS dealer.

Transporting the Vehicle

Follow these procedures when transporting the vehicle.

1. Stop the engine.
2. Place the transmission in PARK.
3. Lock the parking brake.
4. Secure the fuel cap, oil cap and seat.
5. Always tie the frame of the ATV to the transporting unit securely with suitable straps or rope. Do not attach tie straps to the front A-arm bolt pockets, racks or handlebars.
6. Remove the key to prevent loss during transporting.





TROUBLESHOOTING
Drive Belt Wear/Burn

Possible Cause	Solution
Driving onto a pickup or tall trailer in high range	Use low range during loading.
Starting out going up a steep incline	Use low range or turn around using the K-turn (see page 56).
Driving at low RPM or ground speed (3-7 MPH)	Drive at a higher speed or use low range more frequently. See page 104.
Insufficient warm-up at low ambient temperatures	Warm the engine at least 5 minutes. With the transmission in neutral, advance the throttle to about 1/8 throttle in short bursts, 5 to 7 times. The belt will become more flexible and prevent belt burning.
Slow/easy clutch engagement	Use the throttle quickly and effectively.
Towing/pushing at low RPM/low ground speed	Use low range only.
Utility use/plowing	Use low range only.
Stuck in mud or snow	Shift the transmission to low range and carefully use fast, aggressive throttle application to engage clutch. **WARNING**! Excessive throttle may cause loss of control and vehicle overturn.
Climbing over large objects from a stopped position	Shift the transmission to low range and carefully use fast, brief, aggressive throttle application to engage clutch. **WARNING!** Excessive throttle may cause loss of control and vehicle overturn.
Belt slippage from water or snow ingestion into the PVT system	Dry out the PVT. See page 104. Inspect clutch seals for damage if repeated leaking occurs.
Clutch malfunction	See your POLARIS dealer.
Poor engine performance	Check for fouled plugs or foreign material in gas tank or fuel lines. See your dealer.
Slippage from failure to warm up belt	Always warm up the belt by operating below 30 mph for one mile (5 miles or more when temperature is below freezing).
Wrong or missing belt	Install the recommended belt.
Improper break-in	Always break in a new belt and/or clutch. See page 45.

Engine Doesn't Turn Over

Possible Cause	Solution
Tripped circuit breaker or blown fuse	Reset the breaker/Replace fuse
Low battery voltage	Recharge the battery to 12.8 VDC
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten

Engine Turns Over, Fails to Start

Possible Cause	Solution
Out of fuel	Refuel, cycle key to ON position three times for 5 seconds each, then start
Clogged fuel filter	Replace the filter
Water is present in fuel	Drain the fuel system and refuel
Old or non-recommended fuel	Replace with fresh recommended fuel
Fouled or defective spark plugs	Inspect plugs and replace if necessary
No spark to spark plug	Inspect plugs, verify stop switch is on
Water or fuel in crankcase	Immediately see your POLARIS dealer
Low battery voltage	Recharge the battery to 12.8 VDC
Mechanical failure	See your dealer

Engine Backfires

Possible Cause	Solution
Weak spark from spark plug	Inspect, clean and/or replace spark plugs
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Old or non-recommended fuel	Replace with fresh recommended fuel
Incorrectly installed spark plug wires	See your dealer
Incorrect ignition timing	See your dealer
Mechanical failure	See your dealer
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with fresh recommended fuel

TROUBLESHOOTING

Engine Pings or Knocks

Possible Cause	Solution
Poor quality or low octane fuel	Replace with recommended fuel
Incorrect ignition timing	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs

Engine Runs Irregularly, Stalls or Misfires

Possible Cause	Solution
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Low battery voltage	Recharge battery to 12.8 VDC
Kinked or plugged fuel tank vent line	Inspect and replace
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Reverse speed limiter malfunction	See your dealer
Electronic throttle control malfunction	See your dealer
Other mechanical failure	See your dealer
Possible Lean Fuel Cause	**Solution**
Low or contaminated fuel	Add or change fuel, clean the fuel system
Kinked or plugged fuel tank vent line	Inspect and replace
Low octane fuel	Replace with recommended fuel
Clogged fuel filter	Replace filter
Incorrect fuel	Replace with recommended fuel
Possible Rich Fuel Cause	**Solution**
Fuel is very high octane	Replace with lower octane fuel
Stopping/starting without adequate warm-up	Allow engine to warm up before operating and/or stopping
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace

Engine Stops or Loses Power

Possible Cause	Solution
Out of fuel	Refuel, cycle key to ON position three times for 5 seconds each, then start
Kinked or plugged fuel vent line	Inspect and replace
Water is present in fuel	Replace with new fuel
Fouled or defective spark plugs	Inspect, clean and/or replace spark plug
Worn or defective spark plug wires	See your dealer
Incorrect spark plug gap or heat range	Set gap to specs or replace plug
Loose ignition connections	Check all connections and tighten
Low battery voltage	Recharge the battery to 12.8 VDC
Incorrect fuel	Replace with fresh recommended fuel
Clogged air filter	Inspect and clean or replace
Reverse speed limiter malfunction	See your dealer
Electronic throttle control malfunction	See your dealer
Other mechanical failure	See your dealer
Overheated engine	Clean radiator screen and core, clean engine exterior, see your dealer

Engine Overheating

Possible Cause	Solution
Debris lodged in screen	Remove and clean the screen. Pull on the top portion of the screen, then remove the lower portion.
Plugged Radiator	Use a garden hose to flush any debris from the radiator fins. NOTE: High pressure washers can deform the radiator fins and reduce cooling efficiency.

SPECIFICATIONS

SPORTSMAN FOREST 800	
Maximum Weight Capacity	515 lbs. (234 kg) (includes operator, cargo, accessories)
Dry Weight	741 lbs. (336 kg) +/- 7%, based on configuration
Fuel Capacity	4.13 gal. (15.6 l)
Engine Oil Capacity	2 qts. (1.9 l)
Coolant Capacity	3.6 qts. (3.4 l)
Demand Drive Fluid Capacity	9 oz. (265 ml)
Transmission Oil Capacity	32 oz. (946 ml)
Front Rack/Storage Box Capacity	100 lbs. (45 kg)
Rear Rack Capacity	200 lbs. (91 kg)
Unbraked Trailer Towing Capacity*	1914 lbs. (868 kg)
Overall Length	83 in. (211 cm)
Overall Width	48 in. (122 cm)
Overall Height	48 in. (122 cm)
Wheelbase	50.75 in. (128.9 cm)
Ground Clearance	11.25 in. (28.5 cm)
Minimum Turning Radius	65 in. (165 cm) unloaded
Engine	SPM800 4-Stroke (Low Torque Capacity)
Displacement	760 cc
Engine Power	41 kW
Bore x Stroke	80 x 76
Alternator Output	500 Watts @ 3000 rpm
Compression Ratio	10:1
Starting System	Electric
Fuel System	Electronic Fuel Injection
Ignition System	ECU
Ignition Timing	8 BTDC @ 2000 RPM
Spark Plug / Gap	RC7YC / .035 in. (0.9 mm)
Lubrication System	Pressurized Wet Sump
Seat	Single Seat, length 650 mm
Steering System	Akerman Principle, with handlebar controls
Transmission Power System	Shaft drive on all wheels
Driving System Type	Automatic PVT (POLARIS Variable Transmission)
Front Suspension	MacPherson strut with 8.2" (21 cm) travel
Rear Suspension	Progressive rate with 9.5" (24 cm) travel

* Based on EU Directive 76/432/EC

SPORTSMAN FOREST 800	
Transmission	Automatic PVT with E-Z Shift H/L/N/R/P
Gear Reduction, Low	23.91:1
Gear Reduction, Reverse	21.74:1
Gear Reduction, High	8.28:1
Drive Ratio, Front	3.82:1
Tires/Pressure, Front	Off Road Style, Deep Tread Design Size 25x8-12 / 5 psi (34.5 KPa)
Tires/Pressure, Rear	Off Road Style, Deep Tread Design Size 25x11-12 / 5 psi (34.5 KPa)
Brakes, Front	Single-Control Hydraulic Disc
Brakes, Rear	Single-Control Hydraulic Disc
Brakes, Auxiliary	Foot-Activated Hydraulic Disc
Brake, Parking	Hydraulic lock on all wheels, Mechanical Lock in Park
Hitch	Rear mounting for attachment of coupling devices
Winch	Front permanent installed winch with 2500 lbs. (1125 kg) capacity
Headlight	1 Single Beam on Headlight Pod (50 watt) 2 Single Beam on Bumper (50 watt)
Taillights	8.26 watts
Brake Light	26.9 watts
Instrument Cluster	LCD

Clutching

Altitude		Shift Weight	Drive Clutch Spring	Driven Clutch Spring	Helix
Meters (Feet)	0-1800 (0-6000)	23-62 PN 5632337	Black PN 7043594	Black/Almond PN 7043167	48-54 Progressive
	1800-3700 (6000-12000)	23-58 PN 5632218	Black PN 7043594	Black/Almond PN 7043167	48-54 Progressive

POLARIS PRODUCTS

Part Number	Description
	Engine Lubricant
2870791	Fogging Oil (12 oz. Aerosol)
2876244	PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil (qt./.95 l)
2876245	PS-4 PLUS Performance Synthetic 2W-50 4-Cycle Oil (gal./3.8 l)
	Gearcase / Transmission Lubricants
2878068	AGL PLUS Transmission Fluid (qt./.95 l)
2878069	AGL PLUS Transmission Fluid (gal./3.8 l)
2877922	Demand Drive Plus Fluid (qt./.95 l)
2877923	Demand Drive Plus Fluid (gal./3.8 l)
2871653	Premium ATV Angle Drive Fluid (8 oz./237 ml)
2872276	Premium ATV Angle Drive Fluid (2.5 gal./9.5 l)
2870465	Pump for Gallon (3.8 l) Jug
	Coolant
2871323	60/40 Coolant (gal./3.8 l)
2871534	60/40 Coolant (qt./.95 l)
	Grease / Specialized Lubricants
2871312	Grease Gun Kit, Premium All Season
2871322	Premium All Season Grease (3 oz./89 ml cartridge)
2871423	Premium All Season Grease (14 oz./414 ml cartridge)
2871460	Starter Drive Grease
2871515	Premium U-Joint Lube (3 oz./89 ml cartridge)
2871551	Premium U-Joint Lube (14 oz./414 ml cartridge)
2871329	Dielectric Grease (Nyogel™)
	Additives / Miscellaneous
2871326	Carbon Clean Plus
2870652	Fuel Stabilizer
2872189	DOT 4 Brake Fluid
2871956	Loctite™ 565 Thread Sealant
2859044	POLARIS Battery Tender™ Charger

LIMITED WARRANTY

POLARIS Sales Inc., 2100 Highway 55, Medina, MN 55340, gives a SIX MONTH LIMITED WARRANTY on all components of the POLARIS All Terrain Vehicle (ATV) against defects in material or workmanship. This warranty covers the parts and labor charges for repair or replacement of defective parts which are covered by this warranty. This warranty begins on the date of purchase. The duration of this warranty may vary depending on location. This warranty is transferable to another consumer during the warranty period through a POLARIS dealer.

REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to POLARIS within ten days. Upon receipt of this registration, POLARIS will record the registration for warranty. No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be the warranty entitlement. If you have not signed the original registration and received the customer copy, please contact your dealer immediately. NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR ATV IS REGISTERED WITH POLARIS.

Initial dealer preparation and set-up of your ATV is very important in ensuring trouble-free operation. Purchasing a machine in the crate or without proper dealer set-up will void your warranty coverage.

WARRANTY COVERAGE AND EXCLUSIONS: LIMITATIONS OF WARRANTIES AND REMEDIES

The POLARIS limited warranty excludes any failures that are not caused by a defect in material or workmanship. This warranty does not cover accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any ATV that has been altered structurally, modified, neglected, improperly maintained, used for racing, or used for purposes other than for which it was manufactured, or for any damages which occur during trailer transit or as a result of unauthorized service or the use of unauthorized parts. In addition, this warranty does not cover physical damage to paint or finish, stress cracks, tearing or puncturing of upholstery material, corrosion, or defects in parts, components or the ATV due to fire, explosions or any other cause beyond POLARIS' control.

WARRANTY
LIMITATIONS OF WARRANTIES AND REMEDIES

Warranty does not apply to parts exposed to friction surfaces, stresses, environmental conditions and/or contamination for which they were not designed or not intended, including but not limited to the following items:

- Wheels and tires
- Suspension components
- Brake components
- Seat components
- Clutches and components
- Steering components
- Batteries
- Light bulbs/Sealed beam lamps
- Finished and unfinished surfaces
- Carburetor/Throttle body components
- Engine components
- Drive belts
- Hydraulic components
- Circuit breakers/Fuses
- Electronic components

Warranty applies to the product only and does not allow for coverage of personal loss. Some items are considered "consumable," meaning they are considered part of normal maintenance or part of completing an effective repair. The following items are excluded from warranty coverage in the event of a warranty claim:

- Spark Plugs
- Filters
- Fuel
- Sealants
- Hotel fees
- Towing charges
- Mileage
- Rentals/Loss of product use
- Lubricants such as oil, grease, etc.
- Batteries (unless defective)
- Cosmetic damage/repair
- Coolants
- Meals
- Shipping/ handling fees
- Product pick-up/delivery
- Loss of vacation/personal time

This warranty also excludes failures resulting from improper lubrication; improper engine timing; improper fuel; surface imperfections caused by external stress, heat, cold or contamination; operator error or abuse; improper component alignment, tension, adjustment or altitude compensation; failure due to snow, water, dirt or other foreign substance ingestion/contamination; improper maintenance; modified components; use of aftermarket components resulting in failure; unauthorized repairs; repairs made after the warranty period expires or by an unauthorized repair center; use of the product in competition or for commercial purposes. Warranty will not apply to any product which has been damaged by abuse, accident, fire or any other casualty not determined a defect of materials or workmanship.

LIMITATIONS OF WARRANTIES AND REMEDIES

This warranty does not cover the use of unauthorized lubricants, chemicals, or fuels that are not compatible with the ATV. The exclusive remedy for breach of this warranty shall be, at POLARIS' exclusive option, repair or replacement of any defective materials, or components or products. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. POLARIS SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. THIS EXCLUSION OF CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE. Some states do not permit the exclusion or limitation of incidental or consequential damages or implied warranties, so the above limitations or exclusions may not apply to you if inconsistent with controlling state law.

ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE ABOVE SIX MONTH WARRANTY PERIOD. POLARIS FURTHER DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you if inconsistent with controlling state law.Y

HOW TO OBTAIN WARRANTY SERVICE

If your ATV requires warranty service, you must take it to a POLARIS dealer authorized to repair POLARIS ATVs. When requesting warranty service you must present your copy of the Warranty Registration form to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). POLARIS suggests that you use your original selling dealer; however, you may use any POLARIS Servicing Dealer to perform warranty service.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance they will contact the appropriate person at POLARIS.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If any of the above terms are void because of state or federal law, all other warranty terms will remain in effect.

MAINTENANCE LOG

Present this section of your manual to your dealer each time your vehicle is serviced. This will provide you and future owners with an accurate log of maintenance and services performed.

DATE	MILES (KM) OR HOURS	TECHNICIAN	SERVICE PERFORMED / COMMENTS

MAINTENANCE LOG

DATE	MILES (KM) OR HOURS	TECHNICIAN	SERVICE PERFORMED / COMMENTS

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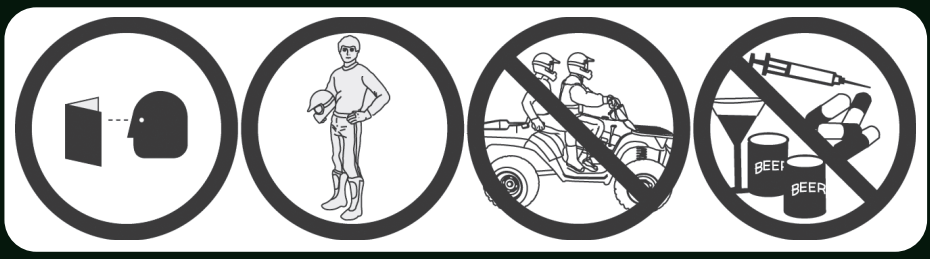

Before you operate this vehicle, read the owner's manual

POLARIS
The Way Out.

For your nearest Polaris dealer,
call 1-800-POLARIS
or visit www.polarisindustries.com
Polaris Sales Inc., 2100 Hwy 55
Medina, MN 55340
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